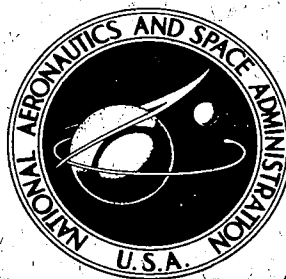


**NASA TECHNICAL
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**ATOMIC ELECTRON ENERGIES INCLUDING
RELATIVISTIC EFFECTS AND QUANTUM
ELECTRODYNAMIC CORRECTIONS**

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16. Abstract Atomic electron energies have been calculated relativistically. Hartree-Fock-Slater wave functions served as zeroth-order eigenfunctions to compute the expectation of the total Hamiltonian. A first-order correction to the local approximation was thus included. Quantum-electrodynamic corrections were made. For all orbitals in all atoms with $2 \leq Z \leq 106$, the following quantities are listed: total energies, electron kinetic energies, electron-nucleus potential energies, electron-electron potential energies consisting of electrostatic and Breit interaction (magnetic and retardation) terms, and vacuum polarization energies. These results will serve for detailed comparison of calculations based on other approaches. The magnitude of quantum-electrodynamic corrections is exhibited quantitatively for each state.					
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NOTATION

LEVEL	orbital (e.g., $1s_{1/2} = 1s_{1/2}$)
(ELECTRONS)	number of electrons in orbital
E(KIN)	kinetic energy (eq. (5))
E(E-N)	electron-nucleus potential energy (eq. (7))
E(E-E)	electrostatic electron-electron interaction (eqs. (8) and (9))
E(MAG)	magnetic interaction energy (eqs. (16) and (17))
E(RET)	retardation energy
E(V-P)	Uehling vacuum-polarization energy
E(H-VP)	higher-order vacuum polarization correction terms
HELIUM, etc.	element
$1s_2$, etc.	ground-state configuration
$Z=2$, etc.	atomic number
$A=4$, etc.	mass number of most abundant isotope for which nuclear radius is computed
R	nuclear radius in atomic units of length
ETOT	total energy for the element

All energies are listed in atomic units (a.u.); $1 \text{ a.u.} = 27.2116 \text{ eV} = 2 \text{ Ry}$

ATOMIC ELECTRON ENERGIES INCLUDING RELATIVISTIC EFFECTS
AND QUANTUM ELECTRODYNAMIC CORRECTIONS

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INTRODUCTION

An enhanced need for accurate and extensive calculations of atomic electron energies has arisen as experimental techniques (notably x-ray photoelectron spectrometry) are being refined and as interest in the physics of heavy atoms and of highly ionized species is growing. Here, we report on some results of relativistic calculations (ref. 1) based on an improved form of the Hartree-Fock-Slater formalism (refs. 2-8). The total energy of electrons in each orbital of neutral atoms with $2 \leq Z \leq 106$ is listed and broken down into contributions due to electron kinetic energy, electron-nucleus potential energy, and electron-electron potential energy consisting of electrostatic and Breit interaction (magnetic and retardation) terms. A vacuum polarization correction is also computed; the leading term (Uehling potential) is listed separately from contributions due to terms of higher order.

THEORY

It is well-known that the Slater exchange potential has the wrong asymptotic form at large radii, going to zero exponentially rather than as r^{-1} . If the variational process is performed after making the statistical approximation for the exchange term in the total energy, an effective exchange potential equal to $2/3$ of the Slater potential is found (refs. 4-6). Results are thus improved, but the wrong asymptotic form remains. The problem is often remedied by applying Latter's tail correction (ref. 7). The reasons why the local approximation fails at large radii have been noted by several authors (refs. 7-9). The local approximation involves the assumption that the electron wavelength is small compared with the distance over which the potential undergoes a substantial fractional change; this requirement is not fulfilled in atoms at large radii. Furthermore, it is assumed in the Hartree-Fock expression for the exchange energy that the antisymmetry of the wave function is more important than electrostatic repulsion in keeping the electrons apart; this is true for high electron densities but not for low densities. To account for these factors, Liberman *et al.* (refs. 9,10) constructed a modified Kohn-Sham potential, which is essentially a Kohn-Sham potential with a tail

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correction, but formulated in a more consistent manner. The Liberman *et al.* version (ref. 10) of the Hartree-Fock-Slater method is used in the present computations, with a modified finite-nucleus routine.

It has been pointed out by Rosén and Lindgren (ref. 2) that the exchange energy calculated by the Hartree-Fock-Slater method introduces non-negligible errors in the total energy. We use the wave-function output of the Hartree-Fock-Slater program (ref. 10) as zeroth-order eigenfunctions to compute the expectation value of the total Hamiltonian. Thus, an effective first-order correction to the local approximation is made.

Zeroth-Order Wave Functions

In the Hartree-Fock-Slater formalism, the total wave function is taken to be a single Slater determinant of orbital functions. These orbital functions satisfy a set of Dirac equations with a local spherically symmetric potential

$$[c\vec{\alpha} \cdot \vec{p} + \beta c^2 + U(r)]\psi_{n\kappa m}(r) = E_{n\kappa}\psi_{n\kappa m}(r) \quad (1)$$

We take the potential $U(r)$ to be that of a finite nucleus, consisting of a uniformly charged sphere, and the electron Coulomb potential with modified Kohn-Sham exchange (refs. 4, 9, 10). The orbital wave functions have the form

$$\psi_{n\kappa m}(r) = \frac{1}{r} \begin{cases} P_{n\kappa}(r)\chi_{\kappa m} \\ iQ_{n\kappa}(r)\chi_{-\kappa m} \end{cases} \quad (2)$$

where the $\chi_{\kappa m}$ are normalized spinors.

Total Hamiltonian

Using Dirac single-electron theory, the total Hamiltonian for a many-electron atom can be written

$$H = \sum_{i=1}^N [c\vec{\alpha}_i \cdot \vec{p}_i + \beta_i c^2 + V_n(r_i)] + \sum_{i<j}^N \frac{1}{r_{ij}} \quad (3)$$

in atomic units.

The expectation value of the total Hamiltonian consists of kinetic energy and electrostatic interaction energy.

Kinetic Energy

The kinetic energy of each orbital electron can be expressed as the integral of radial components $P_{n\kappa}(r)$ and $Q_{n\kappa}(r)$:

$$E_k(A) = \int_0^\infty dr \left[c^2(P_A^2 - Q_A^2) + cQ_A \left(\frac{dP_A}{dr} + \frac{\kappa}{r} P_A \right) - cP_A \left(\frac{dQ_A}{dr} - \frac{\kappa}{r} Q_A \right) \right] - c^2 \quad (4)$$

Here we denote a set of quantum numbers (n, κ) by A . By using the Dirac equation satisfied by P_A and Q_A , the kinetic energy can be rewritten as

$$E_k = E_A - \int_0^\infty dr U(r)(P_A^2 + Q_A^2) \quad (5)$$

where E_A is the eigenvalue of the orbital A , and $U(r)$ is the effective potential in equation (2). Kinetic energies computed from equation (5) for each orbital are included in Table I.

Electron-Nucleus Energy

We take the nucleus to be a homogeneously charged sphere, with a radius (ref. 11) $R = 1.20 \times 10^{-13} \alpha^{1/3} \text{ cm} = 2.2677 \times 10^{-5} \alpha^{1/3} \text{ atomic units (a.u.)}$, where α is the mass number. The nuclear radius of the most abundant isotope of each element is used in the calculations. The nuclear potential experienced by the electrons is

$$V_n(r) = \begin{cases} -\frac{Z}{R_n} \left[\frac{3}{2} - \frac{1}{2} \left(\frac{r}{R_n} \right)^2 \right], & r \leq R_n \\ -\frac{Z}{r}, & r > R_n \end{cases} \quad (6)$$

The electron-nucleus potential energy (Table I) is

$$E_n(A) = \int_0^\infty dr V_n(r)(P_A^2 + Q_A^2) \quad (7)$$

Electrostatic Energy

The average electrostatic interaction energy (Table I) between two electrons in the same shell A is

$$E_e(A, A) = F_o^E(A, A) - \frac{2j_A + 1}{4j_A} \sum_{k>0} \Gamma_{j_A k j_A} G_k^E(A, A) \quad (8)$$

For two electrons from different shells (A, B) we have

$$E_e(A, B) = F_o^E(A, B) - \frac{1}{2} \sum_k \Gamma_{j_A k j_B} G_k^E(A, B) \quad (9)$$

Here, the electric Slater integrals* F_k^E , G_k^E , and the coefficients $\Gamma_{j_A k j_B}$ are defined as follows (ref. 12):

$$F_k^E(A,B) = \int_0^\infty \int_0^\infty [P_A^2(1) + Q_A^2(1)][P_B^2(2) + Q_B^2(2)] \frac{r_{<}^k}{r_{>}^{k+1}} dr_1 dr_2 \quad (10)$$

$$G_k^E(A,B) = \int_0^\infty \int_0^\infty [P_A(1)P_B(1) + Q_A(1)Q_B(1)] \times [P_A(2)P_B(2) + Q_A(2)Q_B(2)] \frac{r_{<}^k}{r_{>}^{k+1}} dr_1 dr_2 \quad (11)$$

and

$$\Gamma_{j_A k j_B} = \frac{2}{2j_A + 1} \left[C(j_B k j_A; \frac{1}{2} 0) \right]^2 \quad (12)$$

where the $C[j_A k j_A; (1/2)0]$ are Clebsch-Gordan coefficients (ref. 13).

Breit Interaction Energy

The interaction between any two atomic electrons due to the exchange of a single transverse photon is approximated by the Breit interaction (ref. 14). The expectation value of the Breit interaction has traditionally been treated as a sum of two terms (refs. 12, 14-17):

$$H_{Br} = H_m + H_r, \quad (13)$$

where

$$H_m = - \frac{\vec{\alpha}_1 \cdot \vec{\alpha}_2}{r_{12}} \quad (14)$$

and

$$H_r = \frac{1}{2} \left[\frac{\vec{\alpha}_1 \cdot \vec{\alpha}_2}{r_{12}} - \frac{(\vec{\alpha}_1 \cdot \vec{r}_{12})(\vec{\alpha}_2 \cdot \vec{r}_{12})}{r_{12}^3} \right] \quad (15)$$

The appropriate interaction energies E_m and E_r are as follows:

(i) The magnetic interaction energy for electrons in the same shell is (ref. 12)

*Complete tables of Slater integrals calculated in the course of this work are contained in NASA Technical Report No. NASA TR R-464, available from National Technical Information Service, Springfield, Virginia 22161.

$$E_m(A,A) = \frac{2j_A + 1}{4j_A} \sum_k \Gamma_{j_A k j_A}^M F_k^M(A,A) \quad (16)$$

For electrons from different shells, the magnetic interaction energy is

$$E_m(A,B) = \frac{1}{2} \sum_{k,\gamma} \Gamma_{j_A k j_B}^{a_A a_B}(\gamma) G_k^M(A,B;\gamma) \quad (17)$$

Here, we have

$$F_k^M(A,A) = \int_0^\infty \int_0^\infty P_A(1) Q_A(1) P_A(2) Q_A(2) \left(\frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (18)$$

$$G_k^M(A,B;1) = \int_0^\infty \int_0^\infty P_A(1) Q_B(1) P_A(2) Q_B(2) \left(\frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (19)$$

$$G_k^M(A,B;0) = \int_0^\infty \int_0^\infty P_A(1) Q_B(1) Q_A(2) P_B(2) \left(\frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (20)$$

$$G_k^M(A,B;-1) = \int_0^\infty \int_0^\infty Q_A(1) P_B(1) Q_A(2) P_B(2) \left(\frac{r_{<}^k}{r_{>}^{k+1}} \right) dr_1 dr_2 \quad (21)$$

The Γ coefficients are defined as

$$\Gamma_{j k j}^{aa'}(\gamma) = \frac{12}{2k+1} \sum_{\mu} (2\mu+1) \left[W\left(\frac{1}{2} 1\lambda j; \frac{1}{2} \mu\right) C\left(j' \mu k; \frac{1}{2}, -\frac{1}{2}\right) \right]^2 \quad (22)$$

$$\Gamma_{j k j}^M = \sum_{\gamma} \Gamma_{j k j}^{aa}(\gamma) \quad (23)$$

where the $W[(1/2)1\lambda j; (1/2)\mu]$ are Racah coefficients (ref. 13).

(ii) The retardation energy E_r is given by expressions of the form of equations (16) and (17) with the Γ coefficients replaced by their Λ -coefficient equivalents (ref. 12). The retardation contribution within one and the same shell vanishes.

Both the magnetic energy E_m and the retardation energy E_r are listed in Table I.

Vacuum Polarization Energy

We use first-order perturbation theory to calculate the vacuum polarization correction. The terms of order $\alpha(Z\alpha)$, $\alpha^2(Z\alpha)$, $\alpha(Z\alpha)^3$, $\alpha(Z\alpha)^5$, and $\alpha(Z\alpha)^7$ are computed according to the method suggested by Huang and Hughes (ref. 18). The leading term proportional to $\alpha(Z\alpha)$, known as the Uehling potential (ref. 19), is listed under "E(V-P)" in Table I, while all the terms of higher order are combined under "E(H-VP)."

Total Energy

For a configuration consisting of closed shells, or for the statistical average over the multiplets of a configuration, the total energy is

$$\begin{aligned}
 E_{\text{tot}} = & \sum_A q_A [E_k(A) + E_n(A) + E_{VP}(A)] \\
 & + \sum_A \frac{q_A(q_A - 1)}{2} [E_e(A,A) + E_m(A,A)] \\
 & + \sum_{A < B} q_A q_B [E_e(A,B) + E_m(A,B) + E_r(A,B)] \quad (24)
 \end{aligned}$$

where the first two terms are summed over all shells, while the last is summed over distinct pairs only; q_A and q_B are the numbers of electrons in shells A and B, respectively. Total energies for each atom with $2 \leq Z \leq 106$ are included in Table I.

The principal source of error in the present total-energy calculations is the neglect of electron-electron Coulomb correlation energies. At this time there is no efficient and reliable method for calculating correlation energies for large atoms. The contribution to the total energy due to electron correlations can be estimated by the semiempirical approach of Cowan (ref. 20), which yields, e.g., -1.394 a.u. for Kr.

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Moffett Field, Calif. 94035, June 22, 1976

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TABLE 1.- ATOMIC ELECTRON ENERGIES

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HELIUM 1S2 Z=2 A=4 R=3.59975E-05 A.U.							
1S1/2 -- (2)	1.399113	-3.332865	1.005476833	6.15373E-05		-3.62956E-07	-3.14608E-09
ETOT	-2.86197	2.79823	-6.66573	1.00548	6.15373E-05	0.	-7.25913E-07 -6.29216E-09
LITHIUM 2S1 Z=3 A=7 R=4.33795E-05 A.U.							
1S1/2 -- (2)	3.481398	-7.901181	1.607406680	2.42695E-04		-2.00967E-06	-1.72895E-08
2S1/2 -- (1)	0.248107	-1.089902	0.000000000	0.	-3.05155E-07	-6.88331E-08	-5.92176E-10
ETOT	-7.42896	7.21090	-16.89226	2.25215	2.50359E-04	-6.10309E-07	-4.08818E-06 -3.51713E-08
BERYLLIUM 2S2 Z=4 A=9 R=4.71701E-05 A.U.							
1S1/2 -- (2)	6.568166	-14.482875	2.222896254	6.30378E-04		-6.68802E-06	-5.69685E-08
2S1/2 -- (2)	0.560647	-2.157798	0.342626679	2.48914E-06	-1.05149E-06	-2.80211E-07	-2.38678E-09
ETOT	-14.56910	14.25763	-33.28134	4.45396	6.81262E-04	-4.20598E-06	-1.39365E-05 -1.18711E-07
BORON 2P1 Z=5 A=11 R=5.04332E-05 A.U.							
1S1/2 -- (2)	10.649863	-23.062266	2.841325803	1.30274E-03		-1.68292E-05	-1.41580E-07
2S1/2 -- (2)	1.039686	-3.656090	0.460065688	6.22700E-06	-2.62587E-06	-8.12752E-07	-6.83724E-09
2P1/2 -- (1)	0.713880	-2.931436	0.000000000	0.	-4.34923E-06	-7.21991E-11	-6.43092E-13
ETOT	-24.52970	24.09298	-56.36815	7.74404	1.48411E-03	-1.96976E-05	-3.52840E-05 -2.96835E-07
CARBON 2P2 Z=6 A=12 R=5.19174E-05 A.U.							
1S1/2 -- (2)	15.714185	-33.625679	3.459377374	2.33567E-03		-3.55304E-05	-2.94468E-07
2S1/2 -- (2)			0.790386623	5.51520E-05	-5.20134E-06		
2P1/2 -- (2)			0.741369105	6.05837E-05	-9.60423E-06		

TABLE 1.- CONTINUED.

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CARBON 2P2 Z=6 A=12 R=5.19174E-05 A.U.							
2S1/2 -- (2)	1.644134	-5.500418	0.573644645	1.22850E-05		-1.84380E-06	-1.52802E-08
2P1/2 2P1/2			0.484409534	5.16448E-06	-4.16506E-07		
2P1/2 -- (2)	1.205555	-4.565420	0.509573712	1.57080E-05		-2.91424E-10	-2.54998E-12
ETOT	-37.64532	37.12775	-87.38303	12.60726	2.84726E-03	-6.08883E-05	-7.47490E-05 -6.19501E-07
NITROGEN 2P3 Z=7 A=14 R=5.46548E-05 A.U.							
1S1/2 -- (2)	21.765278	-46.178484	4.077685880	3.80714E-03		-6.65728E-05	-5.42128E-07
2S1/2 2S1/2			0.944025648	9.33972E-05	-8.98820E-06		
2P1/2 2P1/2			0.906327010	1.12008E-04	-1.77499E-05		
2P3/2 2P3/2			0.905119335	6.20651E-05	-1.77140E-05		
2S1/2 -- (2)	2.364469	-7.686022	0.684714982	2.11074E-05		-3.59595E-06	-2.92812E-08
2P1/2 2P1/2			0.585629378	8.63603E-06	-6.43096E-07		
2P3/2 2P3/2			0.585234766	9.76004E-06	-6.45521E-07		
2P1/2 -- (2)	1.811271	-6.526040	0.623177391	2.89636E-05		-8.88074E-10	-7.60803E-12
2P3/2 2P3/2			0.595531711	5.14730E-06	-2.22250E-13		
2P3/2 -- (1)	1.806411	-6.516559	0.000000000	0.		-1.83776E-10	-1.84101E-12
ETOT	-54.30335	53.68845	-127.29765	19.30128	4.86732E-03	-1.46244E-04	-1.40339E-04 -1.14283E-06
OXYGEN 2P4 Z=8 A=16 R=5.71425E-05 A.U.							
1S1/2 -- (2)	28.807539	-60.726268	4.696545458	5.79545E-03		-1.14404E-04	-9.12931E-07
2S1/2 2S1/2			1.095605356	1.45426E-04	-1.42006E-05		
2P1/2 2P1/2			1.068618792	1.85138E-04	-2.93273E-05		
2P3/2 2P3/2			1.066645067	1.02376E-04	-2.92466E-05		
2S1/2 -- (2)	3.201341	-10.211238	0.794043931	3.31392E-05		-6.33028E-06	-5.05110E-08
2P1/2 2P1/2			0.685070444	1.33341E-05	-9.34977E-07		
2P3/2 2P3/2			0.684429006	1.56334E-05	-9.40155E-07		
2P1/2 -- (2)	2.528834	-8.807699	0.734853814	4.77561E-05		-2.25075E-09	-1.88118E-11
2P3/2 2P3/2			0.702121054	8.48020E-06	-6.80872E-13		
2P3/2 -- (2)	2.519469	-8.789934	0.712142342	3.16801E-05		-4.61717E-10	-4.45215E-12
ETOT	-74.80112	74.11437	-177.07028	28.14754	7.78958E-03	-2.98599E-04	-2.41473E-04 -1.92693E-06

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FLUORINE 2P5 Z=9 A=19 R=6.05113E-05 A.U.							
1S1/2 -- (2)	36.844193	-77.273439	5.315995943	8.37873E-03		-1.84123E-04	-1.43573E-06
2S1/2			1.246795134	2.13622E-04	-2.10911E-05		
2P1/2			1.229902494	2.84021E-04	-4.49728E-05		
2P3/2			1.226885980	1.56753E-04	-4.48106E-05		
2S1/2 -- (2)	4.161257	-13.088200	0.903047825	4.89812E-05		-1.03646E-05	-8.08124E-08
2P1/2			0.783877369	1.94684E-05	-1.30113E-06		
2P3/2			0.782898266	2.34501E-05	-1.31112E-06		
2P1/2 -- (2)	3.361647	-11.417808	0.845616225	7.31362E-05		-5.01774E-09	-4.07626E-11
2P3/2			0.807748727	1.29738E-05	-1.79479E-12		
2P3/2 -- (3)	3.345206	-11.387201	0.818995494	4.84384E-05		-1.02001E-09	-9.40507E-12
ETOT	-99.47060	98.76981	-237.72050	39.46914	1.18737E-02	-5.46191E-04	-3.88988E-04
NEON 2P6 Z=10 A=20 R=6.15548E-05 A.U.							
1S1/2 -- (2)	45.880703	-95.826917	5.936224729	1.16359E-02		-2.81492E-04	-2.13849E-06
2S1/2			1.397073755	2.99830E-04	-2.98616E-05		
2P1/2			1.390007988	4.12068E-04	-6.52196E-05		
2P3/2			1.385636021	2.26988E-04	-6.49208E-05		
2S1/2 -- (2)	5.237321	-16.308192	1.011229071	6.90182E-05		-1.60327E-05	-1.21788E-07
2P1/2			0.881842017	2.72045E-05	-1.75069E-06		
2P3/2			0.880424713	3.34257E-05	-1.76848E-06		
2P1/2 -- (2)	4.304881	-14.351226	0.955411297	1.05915E-04		-1.01497E-08	-7.98207E-11
2P3/2			0.912351536	1.87625E-05	-4.18815E-12		
2P3/2 -- (4)	4.277978	-14.301866	0.924694171	7.00159E-05		-2.04382E-09	-1.78874E-11
ETOT	-128.65249	127.95772	-310.18013	53.55402	1.74208E-02	-9.20842E-04	-5.95079E-04
SODIUM 3S1 Z=11 A=23 R=6.44904E-05 A.U.							
1S1/2 -- (2)	55.925477	-116.397017	6.557722886	1.56474E-02		-4.12926E-04	-3.04662E-06
2S1/2			1.583046025	4.28375E-04	-4.30613E-05		
2P1/2			1.642083355	6.43433E-04	-1.01805E-04		
2P3/2			1.636647609	3.94004E-04	-1.01358E-04		
3S1/2			0.312141801	1.42680E-05	-1.47603E-06		
2S1/2 -- (2)	6.794411	-20.426480	1.151861657	1.02094E-04		-2.50219E-05	-1.84597E-07
2P1/2			1.032771933	3.98502E-05	-2.25536E-06		
2P3/2			1.031151787	5.19652E-05	-2.28831E-06		
3S1/2			0.294280173	1.75117E-06	-3.05841E-07		
2P1/2 -- (2)	5.946633	-18.698941	1.153039891	1.75912E-04		-2.14807E-08	-1.62827E-10
2P3/2			1.100050579	3.13770E-05	-1.06566E-11		
3S1/2			0.296948088	1.46648E-06	-1.00579E-07		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SODIUM 3S1 Z=11 A=23 R=6.44904E-05 A.U.							
2P3/2 -- (4)	5.906914	-18.630146	1.115295391	1.16267E-04		-4.28880E-09	-3.53278E-11
3S1/2 -- (1)	0.354905	-3.533250	0.296891705	1.90036E-06	-1.01141E-07	-8.38109E-07	-6.18305E-09
ETOT	-162.03769	161.31560	65.72311	2.46110E-02	-1.42183E-03	-8.76795E-04	-6.46908E-06
MAGNESIUM 3S2 Z=12 A=24 R=6.54118E-05 A.U.							
1S1/2 -- (2)	66.986331	-138.993250	7.180546675	2.04940E-02		-5.85523E-04	-4.18145E-06
2S1/2			1.774081307	5.93929E-04	-6.02097E-05		
2P1/2			1.885928415	9.44565E-04	-1.49396E-04		
2P3/2			1.878968839	5.18937E-04	-1.48728E-04		
3S1/2			0.405327105	2.99432E-05	-3.13688E-06		
2S1/2 -- (2)	8.626006	-25.094046	1.296263682	1.46122E-04		-3.76116E-05	-2.68578E-07
2P1/2			1.180754178	5.57218E-05	-2.77032E-06		
2P3/2			1.178767858	7.64018E-05	-2.82535E-06		
3S1/2			0.375843926	3.81744E-06	-7.16197E-07		
2P1/2 -- (2)	7.817557	-23.482360	1.341582179	2.68793E-04		-4.16151E-08	-3.02605E-10
2P3/2			1.279014033	4.81676E-05	-2.41293E-11		
3S1/2			0.381154912	3.15918E-06	-2.20268E-07		
2P3/2 -- (4)	7.759299	-23.385003	1.296809564	1.77523E-04		-8.23420E-09	-6.32116E-11
3S1/2 -- (2)	0.668494	-5.054308	0.381060748	4.10069E-06	-2.21841E-07	-1.90874E-06	-1.36300E-08
ETOT	-199.88575	199.23397	79.63788	3.36807E-02	-2.08000E-03	-1.25020E-03	-8.92817E-06
ALUMINUM 3P1 Z=13 A=27 R=6.80310E-05 A.U.							
1S1/2 -- (2)	79.072955	-163.627264	7.804866514	2.62579E-02		-8.07068E-04	-5.55835E-06
2S1/2			1.967697696	8.00206E-04	-8.17400E-05		
2P1/2			2.127838444	1.32658E-03	-2.09729E-04		
2P3/2			2.119013524	7.27776E-04	-2.08765E-04		
3S1/2			0.507322262	5.46914E-05	-5.79506E-06		
3P1/2			0.373362926	4.72767E-05	-7.49419E-06		
2S1/2 -- (2)	10.718015	-30.287146	1.442646506	2.02419E-04		-5.45908E-05	-3.75957E-07
2P1/2			1.328627080	7.53746E-05	-3.30276E-06		
2P3/2			1.326184102	1.07742E-04	-3.38910E-06		
3S1/2			0.463939648	7.20972E-06	-1.42822E-06		
3P1/2			0.350956104	2.47308E-06	-2.77155E-07		
2P1/2 -- (2)	9.939147	-28.760577	1.528421895	3.89007E-04		-7.54136E-08	-5.23276E-10
2P3/2			1.456254727	6.99414E-05	-5.01155E-11		
3S1/2			0.472590204	5.87951E-06	-4.15720E-07		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ALUMINUM 3P1 Z=13 A=27 R=6.80310E-05 A.U.							
2P3/2 -- (4)	9.856079	-28.625396	0.346627254 1.476459244	5.67988E-06 2.56678E-04	-4.79753E-07	-1.47837E-08	-1.04533E-10
3S1/2 -- (2)	1.118271	-6.914191	0.472443118 0.353103781	7.65788E-06 2.10751E-06	-4.19282E-07 -4.09953E-08	-3.75929E-06	-2.58894E-08
3P1/2 -- (1)	0.606873	-4.893224	0.354464429 0.262436780	2.52034E-06 1.84655E-06	-2.50072E-07	-2.85833E-09	-1.98333E-11
ETOT	-242.27341	241.72796	0.000000000	0.	-2.92739E-03	-1.73105E-03	-1.19219E-05
SILICON 3P2 Z=14 A=28 R=6.88607E-05 A.U.							
1S1/2 -- (2)	92.192850	-190.308570	8.430692599 2.162252198	3.30209E-02 1.05082E-03	-1.08076E-04	-1.08600E-03	-7.18446E-06
2S1/2 -- (2)	13.058266	-35.985571	2.367018685 2.355943382	1.79683E-03 9.84356E-04	-2.83940E-04 -2.82582E-04	-7.68120E-05	-5.08161E-07
2P1/2 -- (2)	12.298012	-34.515235	0.598935335 0.470862595	8.57701E-05 8.68026E-05	-9.17895E-06 -1.37595E-05	-1.29298E-07	-8.51059E-10
2P3/2 -- (4)	12.182456	-34.330950	1.589516956 1.475479896	2.72183E-04 9.91561E-05	-9.87768E-07 -3.85313E-06	-2.51052E-08	-1.61173E-10
3S1/2 -- (2)	1.622344	-8.847232	1.472477303 0.542872001	1.46646E-04 1.16338E-05	-3.98228E-06 -2.39360E-06	-6.32214E-06	-4.18251E-08
3P1/2 -- (2)	0.989826	-6.659312	0.554790007 0.431783445	9.34870E-06 1.05564E-05	-6.67155E-07 -9.87768E-07	-6.71162E-09	-4.41772E-11
ETOT	-289.37845	289.05242	0.437413409 1.712579613	5.09394E-06 5.38979E-04	-6.28087E-07	-2.33865E-03	-1.54713E-05
PHOSPHORUS 3P3 Z=15 A=31 R=7.12371E-05 A.U.							
1S1/2 -- (2)	106.351017	-219.044247	1.630847586 0.554582616	9.71220E-05 1.22276E-05	-9.68878E-11	-1.43141E-03	-9.05638E-06
2S1/2 -- (2)			0.441059270 0.417364341	3.94186E-06 4.25967E-06	-8.60232E-08		
2P1/2 -- (2)			0.320372562 0.316322628	3.04058E-06 3.78335E-06	-3.90839E-07		
2P3/2 -- (4)							

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PHOSPHORUS 3P3 Z=15 A=31 R=7.12371E-05 A.U.							
3S1/2			0.684912633	1.23752E-04	-1.33600E-05		
3P1/2			0.562232808	1.38258E-04	-2.19130E-05		
3P3/2			0.559475861	7.48405E-05	-2.17967E-05		
2S1/2 -- (2)	15.644875	-42.186375	1.736660861	3.56827E-04		-1.05237E-04	-6.65900E-07
2P1/2			1.621734153	1.27512E-04	-4.42293E-06		
2P3/2			1.618067520	1.93941E-04	-4.60908E-06		
3S1/2			0.617032460	1.72020E-05	-3.63876E-06		
3P1/2			0.517982240	8.93910E-06	-1.16991E-06		
3P3/2			0.515774973	1.35098E-05	-1.13491E-06		
2P1/2 -- (2)	14.896594	-40.754632	1.895118517	7.22019E-04		-2.11840E-07	-1.31383E-09
2P3/2			1.803792398	1.30293E-04	-1.76688E-10		
3S1/2			0.632126205	1.36356E-05	-9.79527E-07		
3P1/2			0.511359598	1.69985E-05	-1.71123E-06		
3P3/2			0.521231689	7.74042E-06	-1.47689E-07		
2P3/2 -- (4)	14.739495	-40.508091	1.828281882	4.75280E-04		-4.07292E-08	-2.33145E-10
3S1/2			0.631849309	1.79079E-05	-9.90682E-07		
3P1/2			0.523260180	6.37757E-06	-1.51086E-07		
3P3/2			0.515016496	1.63723E-05	-9.18986E-07		
3S1/2 -- (2)	2.178827	-10.893345	0.476174900	6.49681E-06		-9.73581E-06	-6.16052E-08
3P1/2			0.374249955	4.46192E-06	-5.48134E-07		
3P3/2			0.373278623	3.26666E-06	-5.54554E-07		
3P1/2 -- (2)	1.430159	-8.533330	0.376346375	6.48891E-06		-1.34283E-08	-8.32841E-11
3P3/2			0.357166925	1.22881E-06	-3.20705E-12		
3P3/2 -- (1)	1.414923	-8.489425	0.000000000	0.		-2.57838E-09	-1.47605E-11
ETOT	-341.40090	341.37585	-813.34565	130.50246	7.48693E-02	-5.31290E-03	-3.09337E-03
SULFUR 3P4 Z=16 A=32 R=7.19950E-05 A.U.							
1S1/2 -- (2)	121.555104	-249.844297	9.686568887	4.98675E-02		-1.85307E-03	-1.11584E-05
2S1/2			2.553038894	1.70160E-03	-1.77069E-04		
2P1/2			2.841097857	3.03839E-03	-4.79605E-04		
2P3/2			2.824280763	1.65984E-03	-4.77096E-04		
3S1/2			0.767397996	1.69259E-04	-1.84149E-05		
3P1/2			0.649561570	2.02585E-04	-3.21006E-05		
3P3/2			0.645873138	1.09359E-04	-3.19101E-05		
2S1/2 -- (2)	18.477893	-48.889596	1.884015598	4.57810E-04		-1.40917E-04	-8.48759E-07
2P1/2			1.767656323	1.60892E-04	-5.01307E-06		
2P3/2			1.763216138	2.50457E-04	-5.27346E-06		
3S1/2			0.688317379	2.40332E-05	-5.19224E-06		
3P1/2			0.594782641	1.42080E-05	-1.93522E-06		
3P3/2			0.591893200	2.06642E-05	-1.87092E-06		
2P1/2 -- (2)	17.737374	-47.484982	2.076665490	9.41479E-04		-3.34142E-07	-1.93758E-09
2P3/2			1.975674321	1.70040E-04	-3.06951E-10		
3S1/2			0.706504881	1.88163E-05	-1.35853E-06		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SULFUR	3P4	Z=16 A=32 R=7.19950E-05 A.U.					
2P3/2 -- (4)	17.528145	-47.160930	0.587384899 0.599114700 2.002057804 0.706147961 0.601767735 0.591559783	2.51519E-05 1.15345E-05 6.18890E-04 2.48044E-05 9.47070E-06 2.41430E-05	-2.67563E-06 -2.32769E-07 -1.37596E-06 -2.38716E-07 -1.43565E-06	-6.35992E-08	-3.17000E-10
3S1/2 -- (2)	2.788252	-13.070087	0.532517484 0.425574464 0.424319654 0.433735153 0.411455922	9.27823E-06 6.12295E-06 4.72769E-06 1.00623E-05 1.90304E-06	-1.41544E-05 -7.21468E-07 -7.32919E-07 -6.92032E-12	-8.52554E-08	-1.41129E-10
3P1/2 -- (2)	1.924792	-10.530048	0.417365614	6.60080E-06	-4.62329E-09	-2.30473E-11	
ETOT	-398.49065	398.88165	-949.21578	151.76028	9.41531E-02	-6.91869E-03	-4.01726E-03
CHLORINE	3P5	Z=17 A=35 R=7.41780E-05 A.U.					
1S1/2 -- (2)	137.812837	-282.718958	10.316668049 2.749101928 3.077104953 3.056740108 0.847708060 0.734219178 0.729440858	6.01152E-02 2.11026E-03 3.82810E-03 2.08832E-03 2.23020E-04 2.80943E-04 1.51256E-04	-2.20706E-04 -6.03879E-04 -6.00567E-04 -2.44328E-05 -4.45017E-05 -4.42085E-05	-2.36147E-03	-1.34599E-05
2S1/2 -- (2)	21.558115	-56.096433	2.031569304 1.913419860 1.908090129 0.757838970 0.669132472 0.665453378 2.257611177	5.76606E-04 1.99748E-04 3.17025E-04 3.22618E-05 2.11068E-05 2.97127E-05 1.20074E-03	-5.62430E-06 -5.97960E-06 -7.08654E-06 -2.95720E-06 -2.84860E-06	-1.84992E-04	-1.05489E-06
2P1/2 -- (2)	20.822626	-54.711151	2.146854109 0.779061027 0.661112568 0.674491515 2.174964853 0.778612257 0.677869931	2.16945E-04 2.49809E-05 3.51882E-05 1.62209E-05 7.88142E-04 3.30390E-05 1.32866E-05	-5.11812E-10 -1.81089E-06 -3.90878E-06 -3.41945E-07 -1.83683E-06 -2.09482E-06	-5.10318E-07	-2.74164E-09
2P3/2 -- (4)	20.549008	-54.292031	0.665634705 0.587350194 0.475279402 0.473697159 0.489372274 0.464047757	3.36649E-05 1.26609E-05 8.04475E-06 6.51309E-06 1.45946E-05 2.75497E-06	-9.10643E-07 -9.29286E-07 -4.11900E-08	-4.03806E-10	
3S1/2 -- (2)	3.452804	-15.389996	0.470539053	9.55231E-06	-7.73949E-09	-3.25172E-11	
3P1/2 -- (2)	2.473327	-12.660598					
3P3/2 -- (3)	2.438555	-12.573420					

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHLORINE 3P5 Z=17 A=35 R=7.41780E-05 A.U.							
ETOT	-460.81321	461.75112	-1098.04266	175.37562	1.16724E-01	-8.84827E-03	-5.13394E-03 -2.92625E-05
ARGON 3P6 Z=18 A=40 R=7.75542E-05 A.U.							
1S1/2 -- (2)	155.132542	-317.679254	10.948255183	7.16892E-02		-2.96778E-03	-1.59127E-05
2S1/2			2.945596766	2.58021E-03	-2.71103E-04		
2P1/2			3.312882782	4.74279E-03	-7.47663E-04		
2P3/2			3.288477397	2.58367E-03	-7.43365E-04		
3S1/2			0.926515650	2.85704E-04	-3.14960E-05		
3P1/2			0.817183436	3.74698E-04	-5.93271E-05		
3P3/2			0.811135365	2.01211E-04	-5.88953E-05		
2S1/2 -- (2)	24.887117	-63.809147	2.179337527	7.14724E-04		-2.38695E-04	-1.28075E-06
2P1/2			2.059153111	2.44543E-04	-6.25734E-06		
2P3/2			2.052810354	3.94483E-04	-6.73205E-06		
3S1/2			0.826159733	4.20150E-05	-9.35296E-06		
3P1/2			0.741927607	2.98556E-05	-4.27097E-06		
3P3/2			0.737339003	4.08649E-05	-4.09828E-06		
2P1/2 -- (2)	24.154796	-62.437639	2.438225674	1.50323E-03		-7.58030E-07	-3.73222E-09
2P3/2			2.317577848	2.71594E-04	-8.23882E-10		
3S1/2			0.850369977	3.22135E-05	-2.34301E-06		
3P1/2			0.733392674	4.73060E-05	-5.44162E-06		
3P3/2			0.748229022	2.18891E-05	-4.77863E-07		
2P3/2 -- (4)	23.802715	-61.903391	2.347243741	9.85121E-04		-1.41301E-07	-4.76583E-10
3S1/2			0.849816447	4.27258E-05	-2.38016E-06		
3P1/2			0.752449296	1.79001E-05	-4.92890E-07		
3P3/2			0.738090305	4.51092E-05	-2.91203E-06		
3S1/2 -- (2)	4.173348	-17.858922	0.641152063	1.66976E-05		-2.67207E-05	-1.43384E-07
3P1/2			0.523930955	1.02496E-05	-1.11707E-06		
3P3/2			0.521969543	8.65673E-06	-1.14565E-06		
3P1/2 -- (2)	3.077547	-14.934679	0.543891933	2.01933E-05		-6.62621E-08	-3.26284E-10
3P3/2			0.515533620	3.80299E-06	-2.44591E-11		
3P3/2 -- (4)	3.028501	-14.817371	0.522532029	1.31839E-05		-1.23114E-08	-4.15426E-11
ETOT	-528.53143	530.17556	-1260.32233	201.49008	1.42908E-01	-1.11408E-02	-6.46865E-03 -3.46838E-05
POTASSIUM 4S1 Z=19 A=39 R=7.69025E-05 A.U.							
1S1/2 -- (2)	173.523868	-354.737814	11.581428783	8.46729E-02		-3.68396E-03	-1.84489E-05
2S1/2			3.143291089	3.11769E-03	-3.28988E-04		
2P1/2			3.549831436	5.79659E-03	-9.13121E-04		
2P3/2			3.520863776	3.15329E-03	-9.07633E-04		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POTASSIUM 4S1 Z=19 A=39 R=7.69025E-05 A.U.							
3S1/2			1.023655601	3.73644E-04	-4.14354E-05		
3P1/2			0.943188860	5.35754E-04	-8.47872E-05		
3P3/2			0.936442588	2.87689E-04	-8.43296E-05		
4S1/2			0.250036298	1.92035E-05	-2.13965E-06		
2S1/2 -- (2)	28.484085	-72.051956	2.327995386	8.74497E-04		-3.03538E-04	-1.52174E-06
2P1/2			2.205712175	2.95929E-04	-6.90122E-06		
2P3/2			2.198228024	4.84151E-04	-7.52402E-06		
3S1/2			0.908362170	5.57777E-05	-1.25741E-05		
3P1/2			0.849104930	4.50890E-05	-6.56805E-06		
3P3/2			0.844186820	6.02498E-05	-6.29469E-06		
4S1/2			0.244261301	2.85803E-06	-6.64317E-07		
2P1/2 -- (2)	27.755046	-70.693518	2.619802185	1.85444E-03		-1.10010E-06	-4.89818E-09
2P3/2			2.489059961	3.34947E-04	-1.28815E-09		
3S1/2			0.936652166	4.23678E-05	-3.09515E-06		
3P1/2			0.839315201	6.80750E-05	-8.09464E-06		
3P3/2			0.858315699	3.16932E-05	-7.16226E-07		
4S1/2			0.245629769	2.14526E-06	-1.62368E-07		
2P3/2 -- (4)	27.308404	-70.021395	2.520124504	1.21323E-03		-2.02869E-07	-5.07554E-10
3S1/2			0.935952121	5.63186E-05	-3.14889E-06		
3P1/2			0.862700483	2.58124E-05	-7.39017E-07		
3P3/2			0.845752331	6.48580E-05	-4.33679E-06		
4S1/2			0.245594681	2.83344E-06	-1.64850E-07		
3S1/2 -- (2)	5.171576	-20.910642	0.708847789	2.29008E-05		-3.67988E-05	-1.84505E-07
3P1/2			0.593830120	1.36931E-05	-1.40164E-06		
3P3/2			0.591801495	1.23582E-05	-1.44974E-06		
4S1/2			0.231352604	6.74345E-07	-1.94878E-07		
3P1/2 -- (2)	4.108453	-18.226130	0.631133197	3.12914E-05		-1.13198E-07	-5.04102E-10
3P3/2			0.597936884	5.92085E-06	-4.96655E-11		
4S1/2			0.231454969	8.55046E-07	-9.86856E-08		
3P3/2 -- (4)	4.044649	-18.085904	0.606372535	2.04529E-05		-2.08459E-08	-5.21974E-11
4S1/2			0.231325732	9.65079E-07	-1.00041E-07		
4S1/2 -- (1)	0.363579	-4.825708	0.000000000	0.		-1.89348E-06	-9.49379E-09
ETOT	-601.35306	603.86185	-1430.49502	225.12906	1.72960E-01	-1.37995E-02	-8.05380E-03 -4.03328E-05
CALCIUM 4S2 Z=20 A=40 R=7.75542E-05 A.U.							
1S1/2 -- (2)	192.996524	-393.907382	12.216241408	9.91502E-02		-4.52264E-03	-2.09774E-05
2S1/2			3.341899696	3.72697E-03	-3.94861E-04		
2P1/2			3.787595344	6.99845E-03	-1.10159E-03		
2P3/2			3.753507537	3.80167E-03	-1.09468E-03		
3S1/2			1.122033246	4.79066E-04	-5.34200E-05		
3P1/2			1.062135785	7.27036E-04	-1.14996E-04		
3P3/2			1.054265023	3.90082E-04	-1.14496E-04		
4S1/2			0.313720781	3.59661E-05	-4.03277E-06		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALCIUM 4S2 Z=20 A=40 R=7.75542E-05 A.U.							
2S1/2 -- (2)	32.347228	-80.822348	2.477295140	1.05744E-03		-3.80956E-04	-1.76980E-06
2P1/2			2.352835939	3.54369E-04	-7.55802E-06		
2P3/2			2.344072297	5.86838E-04	-8.36222E-06		
3S1/2			0.991173775	7.25000E-05	-1.65248E-05		
3P1/2			0.949544301	6.42268E-05	-9.49128E-06		
3P3/2			0.943979198	8.39500E-05	-9.07578E-06		
4S1/2			0.304178634	5.42349E-06	-1.27860E-06		
2P1/2 -- (2)	31.620877	-79.475076	2.801980037	2.25768E-03		-1.56356E-06	-6.19083E-09
2P3/2			2.660948880	4.07552E-04	-1.96199E-09		
3S1/2			1.023743724	5.46037E-05	-4.00641E-06		
3P1/2			0.938749917	9.29340E-05	-1.13704E-05		
3P3/2			0.961410145	4.34599E-05	-1.01168E-06		
4S1/2			0.306462183	4.03295E-06	-3.08481E-07		
2P3/2 -- (4)	31.061448	-78.639398	2.693236507	1.47442E-03		-2.85187E-07	-4.52849E-10
3S1/2			1.022871643	7.27155E-05	-4.08209E-06		
3P1/2			0.966265476	3.52974E-05	-1.04530E-06		
3P3/2			0.946489007	8.83900E-05	-6.09262E-06		
4S1/2			0.306398478	5.32950E-06	-3.13507E-07		
3S1/2 -- (2)	6.300115	-24.217748	0.776946040	3.06365E-05		-4.95627E-05	-2.30289E-07
3P1/2			0.660303466	1.76016E-05	-1.69053E-06		
3P3/2			0.658029554	1.68729E-05	-1.76398E-06		
4S1/2			0.284196200	1.33662E-06	-4.06078E-07		
3P1/2 -- (2)	5.232019	-21.637089	0.711416311	4.50073E-05		-1.81876E-07	-7.20329E-10
3P3/2			0.673730778	8.52858E-06	-9.18363E-11		
4S1/2			0.285130578	1.65655E-06	-1.94985E-07		
3P3/2 -- (4)	5.148128	-21.462940	0.683280999	2.94078E-05		-3.31615E-08	-5.27503E-11
4S1/2			0.284941762	1.87581E-06	-1.98301E-07		
4S1/2 -- (2)	0.639050	-6.407666	0.221383869	5.67638E-07		-3.72612E-06	-1.73135E-08
ETOT	-679.50734	683.10993	-1613.34397	250.54637	2.07157E-01	-1.68647E-02	-9.91854E-03
SCANDIUM 3D1 Z=21 A=45 R=8.06597E-05 A.U.							
1S1/2 -- (2)	213.575263	-435.216421	12.853290051	0.115217224		-0.005497610	-0.000023383
2S1/2			3.541959641	0.004415019	-0.000469584		
2P1/2			4.027377516	0.008366330	-0.001315813		
2P3/2			3.987545809	0.004538146	-0.001307218		
3S1/2			1.207908939	0.000588107	-0.000065916		
3P1/2			1.157593577	0.000916215	-0.000144825		
3P3/2			1.148174236	0.000490718	-0.000144202		
3D3/2			0.752382123	0.000003493	-0.000000466		
4S1/2			0.339201613	0.000044614	-0.000005030		
2S1/2 -- (2)	36.495238	-90.142426	2.627572824	0.001266058		-0.000472759	-0.000002015
2P1/2			2.501068682	0.000420552	-0.000008207		
2P3/2			2.490869875	0.000704045	-0.000009231		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SCANDIUM 3D1 Z=21 A=45 R=8.06597E-05 A.U.							
3S1/2			1.064640512	0.000090139	-0.000020716		
3P1/2			1.031489525	0.000084420	-0.000012608		
3P3/2			1.024923948	0.000108162	-0.000012013		
3D3/2			0.737785685	0.000030135	-0.000004158		
4S1/2			0.328653482	0.000006812	-0.000001620		
2P1/2 -- (2)	35.777929	-88.814281	2.985673902	0.002719517		-0.000002184	-0.000000008
2P3/2			2.834095917	0.000490531	-0.000000003		
3S1/2			1.100788938	0.000067365	-0.000004954		
3P1/2			1.020254388	0.000117877	-0.000014746		
3P3/2			1.044972037	0.000059246	-0.000001315		
3D3/2			0.734218382	0.000086859	-0.000020426		
4S1/2			0.331210579	0.000005028	-0.000000386		
2P3/2 -- (4)	35.084467	-87.785410	2.867419251	0.001772696		-0.000000394	-0.000000000
3S1/2			1.099743466	0.000089883	-0.000005056		
3P1/2			1.050677374	0.000044819	-0.000001362		
3P3/2			1.028330198	0.000111813	-0.000007891		
3D3/2			0.741893656	0.000025043	-0.000002610		
4S1/2			0.331133405	0.000006654	-0.000000393		
3S1/2 -- (2)	7.363987	-27.441287	0.835883528	0.000038562		-0.0000063772	-0.000000272
3P1/2			0.715035297	0.000021433	-0.000001966		
3P3/2			0.712357851	0.000021385	-0.000002068		
3D3/2			0.600423278	0.000010298	-0.000001056		
4S1/2			0.307068806	0.000001707	-0.000000522		
3P1/2 -- (2)	6.230472	-24.783456	0.774949246	0.000058447		-0.000000269	-0.000000001
3P3/2			0.733655603	0.000011053	-0.000000000		
3D3/2			0.552326067	0.000021479	-0.000003795		
4S1/2			0.308451539	0.000002077	-0.000000244		
3P3/2 -- (4)	6.121159	-24.563548	0.743842154	0.000038119		-0.000000049	-0.000000000
3D3/2			0.588015758	0.000007591	-0.000000475		
4S1/2			0.308233496	0.000002371	-0.000000249		
3D3/2 -- (1)	2.839255	-15.802004	0.000000000	0.000000000		-0.000000000	0.000000000
4S1/2			0.287072836	0.000000620	-0.000000001		
4S1/2 -- (2)	0.753854	-7.280457	0.238948655	0.000000719		-0.000000485	-0.000000021
ETOT	-763.13913	768.05525	-1812.55449	281.14710	0.245485614	-0.020331826	-0.012084647
TITANIUM 3D2 Z=22 A=48 R=8.24137E-05 A.U.							
1S1/2 -- (2)	235.262365	-478.670373	13.492259547	0.132953229		-0.006622990	-0.000025518
2S1/2			3.742608246	0.005184136	-0.000553419		
2P1/2			4.267805434	0.009903894	-0.001556268		
2P3/2			4.221581819	0.005364245	-0.001545686		
3S1/2			1.290277188	0.000707652	-0.000079691		
3P1/2			1.247452847	0.001123321	-0.000177433		
3P3/2			1.236257337	0.000600512	-0.000176649		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TITANIUM 3D2 Z=22 A=48 R=8.24137E-05 A.U.							
3D3/2			0.859401400	0.000005313	-0.000000708		
4S1/2			0.359237672	0.000052323	-0.000005928		
2S1/2 -- (2)	40.910089	-99.990566	2.778161489	0.001501088		-0.000580398	-0.000002243
2P1/2			2.649602846	0.000494778	-0.000008865		
2P3/2			2.637806660	0.000836077	-0.000010152		
3S1/2			1.135512165	0.000109719	-0.000025382		
3P1/2			1.109069272	0.000107389	-0.000016171		
3P3/2			1.101341765	0.000135158	-0.000015345		
3D3/2			0.840355076	0.000043548	-0.000006016		
4S1/2			0.348134620	0.000008082	-0.000001934		
2P1/2 -- (2)	40.205164	-98.684118	3.169698336	0.003241315		-0.000003000	-0.000000009
2P3/2			3.007368699	0.000584042	-0.000000004		
3S1/2			1.175041230	0.000081429	-0.000005998		
3P1/2			1.097545127	0.000145428	-0.000018526		
3P3/2			1.123850056	0.000068243	-0.000001653		
3D3/2			0.836696221	0.000125711	-0.000029593		
4S1/2			0.350859190	0.000005927	-0.000000457		
2P3/2 -- (4)	39.354247	-97.429361	3.041513859	0.002108631		-0.000000535	0.000000000
3S1/2			1.173807769	0.000108841	-0.000006131		
3P1/2			1.130561261	0.000055332	-0.000001718		
3P3/2			1.105627459	0.000137553	-0.000009899		
3D3/2			0.845859771	0.000036320	-0.000003762		
4S1/2			0.350770411	0.000007852	-0.000000466		
3S1/2 -- (2)	8.456968	-30.767617	0.892383994	0.000047307		-0.000080268	-0.000000310
3P1/2			0.766951046	0.000025574	-0.000002254		
3P3/2			0.763802980	0.000026359	-0.000002391		
3D3/2			0.672819700	0.000013506	-0.000001329		
4S1/2			0.325718056	0.000002046	-0.000000625		
3P1/2 -- (2)	7.248244	-27.999615	0.834699770	0.000073286		-0.000000385	-0.000000001
3P3/2			0.789950659	0.000013823	-0.000000000		
3D3/2			0.619390083	0.000028029	-0.000004751		
4S1/2			0.327435623	0.000002448	-0.000000285		
3P3/2 -- (4)	7.108408	-27.724864	0.800634431	0.000047692		-0.000000069	0.000000000
3D3/2			0.660093837	0.000010009	-0.000000593		
4S1/2			0.327189907	0.000002817	-0.000000292		
3D3/2 -- (2)	3.653851	-18.909696	0.563594535	0.000025384		-0.000000000	0.000000000
4S1/2			0.309769477	0.000000791	-0.000000000		
4S1/2 -- (2)	0.844911	-8.079083	0.253103256	0.000000854		-0.000005944	-0.000000023
ETOT	-852.54257	859.01380	-2026.81903	315.01310	0.288462463	-0.024259810	-0.014588381 -0.000056209

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
VANADIUM 3D3 Z=23 A=51 R=8.40961E-05 A.U.							
1S1/2 -- (2)	258.068313	-524.283299	14.133162710	0.152443558		-0.007913824	-0.000027206
2S1/2			3.943795035	0.006038732	-0.000646887		
2P1/2			4.508819352	0.011620464	-0.001824312		
2P3/2			4.455521410	0.006284537	-0.001811408		
3S1/2			1.370667879	0.000839209	-0.000094921		
3P1/2			1.334376142	0.001351956	-0.000213375		
3P3/2			1.321184564	0.000721350	-0.000212391		
3D3/2			0.953964754	0.000007470	-0.000000996		
4S1/2			0.376787870	0.000059981	-0.000006826		
2S1/2 -- (2)	45.592460	-110.368168	2.929031986	0.001764104		-0.000705625	-0.000002437
2P1/2			2.798404138	0.000577539	-0.000009536		
2P3/2			2.734839718	0.000983752	-0.000011136		
3S1/2			1.204928743	0.000131490	-0.000030582		
3P1/2			1.134370105	0.000133530	-0.000020241		
3P3/2			1.175331074	0.000165368	-0.000019124		
3D3/2			0.930707536	0.000058626	-0.000008106		
4S1/2			0.305294483	0.000009362	-0.000002252		
2P1/2 -- (2)	44.902779	-109.085401	3.354003397	0.003826657		-0.000004058	-0.000000010
2P3/2			3.180708343	0.000688643	-0.000000006		
3S1/2			1.247725337	0.000096978	-0.000007149		
3P1/2			1.172639287	0.000176071	-0.000022774		
3P3/2			1.200215427	0.000082669	-0.000002032		
3D3/2			0.925911477	0.000169525	-0.000039939		
4S1/2			0.368146357	0.000006827	-0.000000527		
2P3/2 -- (4)	43.868379	-107.568531	3.215450188	0.002484222		-0.000000715	0.000000001
3S1/2			1.246286544	0.000129826	-0.000007321		
3P1/2			1.208071992	0.000067015	-0.000002119		
3P3/2			1.180476547	0.000166041	-0.000012147		
3D3/2			0.937575593	0.000049062	-0.000005105		
4S1/2			0.368046202	0.000009055	-0.000000538		
3S1/2 -- (2)	9.593021	-34.225445	0.947529423	0.000056998		-0.000099396	-0.000000343
3P1/2			0.817372828	0.000030094	-0.000002558		
3P3/2			0.813693322	0.000031878	-0.000002738		
3D3/2			0.736429132	0.000016883	-0.000001602		
4S1/2			0.342295213	0.000002386	-0.000000726		
3P1/2 -- (2)	8.304752	-31.331576	0.892504470	0.000089816		-0.000000536	-0.000000001
3P3/2			0.844347774	0.000016891	-0.000000000		
3D3/2			0.678896116	0.000003493	-0.0000005726		
4S1/2			0.344287395	0.000002814	-0.000000326		
3P3/2 -- (4)	8.128734	-30.992242	0.855430144	0.000058308		-0.000000094	0.000000000
3D3/2			0.723697354	0.000012580	-0.000000711		
4S1/2			0.344013093	0.000003262	-0.0000000334		
3D3/2 -- (3)	4.468917	-21.945033	0.629577544	0.000003482		-0.000000000	0.000000000
4S1/2			0.328831890	0.000000962	-0.000000000		
4S1/2 -- (2)	0.926215	-8.858849	0.265339877	0.000000983		-0.000007116	-0.000000025
ETOT	-947.87849	956.17029	-2256.38367	352.04465	0.336452550	-0.028687503	-0.017464346

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHROMIUM 3D5 4S1 Z=24 A=52 R=8.46422E-05 A.U.							
1S1/2 -- (2)	282.013053	-572.079229	14.776316408	0.173782105		-0.009386326	-0.000028234
2S1/2			4.145943142	0.006985390	-0.000750801		
2P1/2			4.751244580	0.013532589	-0.002122422		
2P3/2			4.690135313	0.007307411	-0.002106822		
3S1/2			1.443476709	0.000974225	-0.000110645		
3P1/2			1.408698316	0.001578702	-0.000248942		
3P3/2			1.393046722	0.000840212	-0.000247591		
3D3/2			0.960500356	0.000008595	-0.000001146		
3D5/2			0.954467417	0.000003592	-0.000001139		
4S1/2			0.366960403	0.000056388	-0.000006442		
2S1/2 -- (2)	50.557615	-121.293738	3.080499042	0.002057553		-0.000850563	-0.000002575
2P1/2			2.947903837	0.000669535	-0.000010204		
2P3/2			2.932386577	0.001148475	-0.000012174		
3S1/2			1.268803394	0.000154139	-0.000035994		
3P1/2			1.250054367	0.000160515	-0.000024457		
3P3/2			1.239324834	0.000195786	-0.000022985		
3D3/2			0.936967671	0.000065229	-0.000009019		
3D5/2			0.931389139	0.000028620	-0.000008916		
4S1/2			0.357139034	0.000008889	-0.000002143		
2P1/2 -- (2)	49.890661	-120.043025	3.539271703	0.004481827		-0.000005417	-0.000000010
2P3/2			3.354745363	0.000805372	-0.000000009		
3S1/2			1.314377767	0.000113037	-0.000008332		
3P1/2			1.238341592	0.000206837	-0.000027084		
3P3/2			1.266097563	0.000097043	-0.000002412		
3D3/2			0.932450973	0.000188899	-0.000044513		
3D5/2			0.9400098916	0.000005896	-0.000001351		
4S1/2			0.359606135	0.000006451	-0.000000498		
2P3/2 -- (4)	48.643389	-118.223423	3.389850562	0.002903163		-0.000000944	0.000000002
3S1/2			1.312730311	0.000151556	-0.000008548		
3P1/2			1.275503127	0.000078726	-0.000002526		
3P3/2			1.245207622	0.000194346	-0.000014406		
3D3/2			0.944047889	0.000054727	-0.000005689		
3D5/2			0.931613859	0.000095889	-0.000026997		
4S1/2			0.359513127	0.000008570	-0.000000509		
3S1/2 -- (2)	10.670687	-37.646613	0.997157692	0.000066698		-0.000120290	-0.000000364
3P1/2			0.861329324	0.000034601	-0.000002871		
3P3/2			0.856959122	0.000037291	-0.000003098		
3D3/2			0.744407350	0.000018303	-0.000001709		
3D5/2			0.741165639	0.000016303	-0.000001705		
4S1/2			0.337299517	0.000002253	-0.000000671		
3P1/2 -- (2)	9.264027	-34.527557	0.941295022	0.000105646		-0.000000719	-0.000000001
3P3/2			0.890124473	0.000019779	-0.000000000		
3D3/2			0.688309796	0.000038303	-0.000006221		
3D5/2			0.736991887	0.000009619	-0.000000195		
4S1/2			0.339113646	0.000002630	-0.000000299		
3P3/2 -- (4)	9.043916	-34.107561	0.901270094	0.000068351		-0.000000125	0.000000000
3D3/2			0.732118983	0.000013711	-0.000000769		
3D5/2			0.703291238	0.000027127	-0.000003676		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CHROMIUM 3D5 4S1 Z=24 A=52 R=8.46422E-05 A.U.							
3D3/2 -- (4)	4.669558	-23.056235	0.338844882	0.000003075	-0.000000308	-0.000000000	0.000000000
3D5/2 -- (1)	4.618921	-22.911321	0.616226692	0.000035790	-0.000000000	-0.000000000	0.000000000
4S1/2 -- (1)	0.836508	-8.980652	0.620315425	0.000006372	-0.000000000	-0.000000000	0.000000000
ETOT	-1049.23938	1059.67497	0.319778529	0.000000872	-0.000000001	-0.000000000	0.000000000
			0.000000000	0.000000000	0.000000000	-0.000000000	0.000000000
			0.319300667	0.000001244	-0.000000001	-0.0000006974	-0.0000000021
			0.000000000	0.000000000			
			395.37202	0.389238453	-0.033623699	-0.020737879	-0.000062378
MANGANESE 3D5 Z=25 A=55 R=8.62396E-05 A.U.							
1S1/2 -- (2)	307.081551	-622.046305	15.420901176	0.197030520		-0.011056292	-0.000028344
2S1/2 -- (2)	55.771375	-132.728250	4.347899965	0.008023117	-0.000864961	-0.001016544	-0.000002630
2P1/2 -- (2)	55.122156	-131.503969	4.992949846	0.015631687	-0.002449122		
2P3/2 -- (2)	53.631276	-129.335777	4.923308336	0.008427735	-0.002430413		
3S1/2 -- (2)			1.528292180	0.001142722	-0.000130276		
3P1/2 -- (2)			1.503780170	0.001883209	-0.000296680		
3P3/2 -- (2)			1.485901410	0.001000880	-0.000295165		
3D3/2 -- (2)			1.124873815	0.000012954	-0.000001726		
3D5/2 -- (2)			1.119241003	0.000005423	-0.000001722		
4S1/2 -- (2)			0.408543799	0.000075609	-0.000008674		
2P1/2 -- (2)			3.231739090	0.002380915	-0.000010914		
2P3/2 -- (2)			3.096982167	0.000770760	-0.000013320		
3S1/2 -- (2)			1.341455910	0.000182389	-0.000042770		
3P1/2 -- (2)			1.331521790	0.000196604	-0.000030100		
3P3/2 -- (2)			1.319396242	0.000236640	-0.000028169		
3D3/2 -- (2)			1.093571659	0.000094726	-0.000013111		
3D5/2 -- (2)			1.088499724	0.000041750	-0.000012992		
4S1/2 -- (2)			0.396546914	0.000012022	-0.000002914		
2P1/2 -- (2)			3.723742333	0.005203911	-0.000007134		
2P3/2 -- (2)			3.527811767	0.000933576	-0.000000012		
3S1/2 -- (2)			1.390608806	0.000133078	-0.000009818		
3P1/2 -- (2)			1.319515083	0.000247983	-0.000032866		
3P3/2 -- (2)			1.348904474	0.000116384	-0.000002926		
3D3/2 -- (2)			1.087985706	0.000274872	-0.0000064831		
3D5/2 -- (2)			1.100244624	0.000008677	-0.000001976		
4S1/2 -- (2)			0.399581998	0.000008681	-0.000000672		
2P3/2 -- (4)			3.563030715	0.003363178	-0.000001228		
3S1/2 -- (4)			1.388699927	0.000178596	-0.000010091		
3P1/2 -- (4)			1.359476212	0.000094382	-0.000003074		
3P3/2 -- (4)			1.326199691	0.000232394	-0.000017455		
3D3/2 -- (4)			1.103119104	0.000079764	-0.000008286		
3D5/2 -- (4)			1.089052457	0.000139853	-0.000039403		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-M)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MANGANESE 3D5 Z=25 A=55 R=8.62396E-05 A.U.							
3S1/2 -- 4S1/2 (2)	12.021417	-41.589390	0.399458864 1.055665410	0.000011536 0.000079597	-0.000000688	-0.000146882	-0.000000380
3P1/2 3P3/2			0.915907419 0.910977326	0.000040440 0.000044779	-0.000003227 -0.000003520		
3D3/2 3D5/2			0.851134512 0.848526402	0.000024480 0.000022877	-0.000002183 -0.000002185		
4S1/2 3P1/2 -- (2)	10.567976	-38.419765	0.372787831 1.005172044	0.000003087 0.000128732	-0.000000932	-0.000000982	-0.000000001
3P3/2 3D3/2			0.950169907 0.787176941	0.000024049 0.000050845	-0.000000001 -0.000007851		
3D5/2 4S1/2			0.846103686 0.375217000	0.000013891 0.000003553	-0.000000250 -0.000000405		
3P3/2 -- (4)	10.299840	-37.917916	0.961800176 0.838766555	0.000083128 0.000018417		-0.000000169	0.000000001
3D3/2 3D5/2			0.805756581 0.374881932	0.000037094 0.000004176	-0.000004627 -0.000000418		
4S1/2 3D3/2 -- (4)	6.170224	-28.127948	0.746767726 0.752689421	0.000057301 0.000010357	-0.000000000	-0.000000000	0.000000000
3D5/2 4S1/2			0.362205975 0.000000000	0.000001313 0.000000000	-0.000000001	-0.000000000	0.000000000
3D5/2 -- (1)	6.114300	-27.986952	0.000000000 0.361893272	0.000000000 0.000001829	-0.000000001	-0.000000000	0.000000000
4S1/2 -- (2)	1.075016	-10.437076	0.287890731 0.000001248	0.000001248		-0.000009735	-0.000000025
ETOT	-1156.92217	1169.79864	-2762.95702	435.85158	0.448385581	-0.039199011	-0.024480724
IRON 3D6 Z=26 A=56 R=8.67591E-05 A.U.							
1S1/2 -- (2)	333.314435	-674.230224	16.067860413 4.550878828	0.222301729 0.009162428	-0.000990706	-0.012942399	-0.000027243
2S1/2 2P1/2			5.236168652 5.157184154	0.017946593 0.009660361	-0.002808788 -0.002786516		
2P3/2 3S1/2			1.606160206 1.587197177	0.001316378 0.002189233	-0.000150612 -0.000344541		
3P1/2 3P3/2			1.566604200 1.205777526	0.001161206 0.000016359	-0.000342682 -0.000002179		
3D3/2 3D5/2			1.199070436 0.423352195	0.000006837 0.000083821	-0.000002172 -0.000009651		
4S1/2 2S1/2 -- (2)	61.274289	-144.719683	3.383629716 3.246817140	0.002738192 0.000882289		-0.001206400	-0.000002573
2P1/2 2P3/2			3.226830310 1.409034247	0.001529458 0.000211841	-0.000014539 -0.000049835		
3S1/2 3P1/2			1.404095293 1.390181228	0.000234072 0.000278146	-0.000035972 -0.000033492		
3P3/2 3D3/2			1.170543014 1.164529521	0.000116174 0.000051251	-0.000016085 -0.000015925		
3D5/2							

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRON 3D6 Z=26 A=56 R=8.67591E-05 A.U.							
2P1/2 -- (2)	60.649582	-143.523529	0.411168743	0.000013438	-0.000003266	-0.000009293	-0.000000005
2P3/2			3.909252450	0.006003763			
3S1/2			3.701623994	0.001075098	-0.000000016		
3P1/2			1.461311719	0.000153852	-0.000011351		
3P3/2			1.391993604	0.000289766	-0.000038784		
3D3/2			1.421960196	0.000135883	-0.000003447		
3D5/2			1.164654341	0.000337687	-0.000079680		
4S1/2			1.177883034	0.000010721	-0.000002428		
2P3/2 -- (4)	58.879622	-140.963931	0.414277136	0.000009663	-0.000000749	-0.000001580	0.000000008
3S1/2			3.736702260	0.003870811			
3P1/2			1.459135319	0.000206669	-0.000011689		
3P3/2			1.434112770	0.000110250	-0.000003636		
3D3/2			1.397778255	0.000270657	-0.000020550		
3D5/2			1.181421127	0.000098101	-0.000010183		
4S1/2			1.165383415	0.000171675	-0.000048381		
3S1/2 -- (2)	13.319844	-45.507700	0.414141965	0.000012850	-0.000000768	-0.000175907	-0.000000376
3P1/2			1.109078513	0.000092649			
3P3/2			0.964485489	0.000046331	-0.000003594		
3D3/2			0.958831183	0.000052243	-0.000003961		
3D5/2			0.905397012	0.000028809	-0.000002501		
4S1/2			0.902344668	0.000027466	-0.000002505		
3P1/2 -- (2)	11.781788	-42.192160	0.387116141	0.000003458	-0.000001040	-0.000001299	-0.000000001
3P3/2			1.060639556	0.000151410			
3D3/2			1.002160129	0.000028182	-0.000000001		
3D5/2			0.838675831	0.000059964	-0.000009037		
4S1/2			0.901235186	0.000016873	-0.000000289		
3P3/2 -- (4)	11.456232	-41.590074	0.389727490	0.000003938	-0.000000446	-0.000000220	0.000000001
3D3/2			1.013945224	0.000097489			
3D5/2			0.893265834	0.000021761	-0.000001108		
4S1/2			0.857830627	0.000044163	-0.000005305		
3D3/2 -- (4)	7.076050	-31.357611	0.389359637	0.000004657	-0.000000462	-0.000000000	0.000000000
3D5/2			0.801736775	0.000070676			
4S1/2			0.807858642	0.000012783	-0.000000000		
3D5/2 -- (2)	7.005041	-31.182994	0.377486444	0.000001499	-0.000000001	-0.000000000	0.000000000
4S1/2 -- (2)	1.145937	-11.245469	0.800364961	0.000062653	-0.000000001	-0.000011221	-0.000000024
ETOT	-1270.92906	1286.62945	0.377139048	0.000002078	-0.000001386	-0.045361596	-0.000060410
COBALT 3D7 Z=27 A=59 R=8.82815E-05 A.U.							
1S1/2 -- (2)	360.716207	-728.639578	16.716972356	0.249675476		-0.015062847	-0.000024587
2S1/2			4.754531910	0.010406357	-0.001128376		
2P1/2			5.480273118	0.020481895	-0.003201970		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
COBALT	307	Z=27 A=59 R=8.82815E-05 A.U.					
2P3/2			5.391110493	0.011007076	-0.003175637		
3S1/2			1.683642165	0.001505667	-0.000172853		
3P1/2			1.670103188	0.002524219	-0.000396831		
3P3/2			1.646532893	0.001336184	-0.000394568		
3D3/2			1.284732295	0.000020244	-0.000002695		
3D5/2			1.276818753	0.000008447	-0.000002686		
4S1/2			0.437662293	0.000092344	-0.000010669		
2S1/2 -- (2)	67.058056	-157.259146	3.535920054	0.003130463		-0.001422186	-0.000002369
2P1/2			3.397071347	0.001004499	-0.000012349		
2P3/2			3.374538359	0.001748533	-0.000015854		
3S1/2			1.476334955	0.000244167	-0.000057597		
3P1/2			1.476267472	0.000275834	-0.000042527		
3P3/2			1.460391278	0.000323827	-0.000039383		
3D3/2			1.245612696	0.000140066	-0.000019397		
3D5/2			1.238542656	0.000061833	-0.000019187		
4S1/2			0.425318969	0.000014918	-0.000003635		
2P1/2 -- (2)	66.460932	-156.096766	4.095274122	0.006883374		-0.000011981	0.000000001
2P3/2			3.875672358	0.001230148	-0.000000022		
3S1/2			1.531716481	0.000176580	-0.000013027		
3P1/2			1.464089830	0.000335757	-0.000045332		
3P3/2			1.494422197	0.000157266	-0.000004021		
3D3/2			1.239467650	0.000407804	-0.000096258		
3D5/2			1.253497580	0.000013008	-0.000002933		
4S1/2			0.428492621	0.000010687	-0.000000828		
2P3/2 -- (4)	64.373544	-153.089964	3.910341310	0.004426839		-0.000002011	0.000000012
3S1/2			1.529249090	0.000237380	-0.000013441		
3P1/2			1.508313036	0.000127686	-0.000004259		
3P3/2			1.468755888	0.000312547	-0.000023959		
3D3/2			1.257812861	0.000118586	-0.000012300		
3D5/2			1.239707129	0.000207135	-0.000058386		
4S1/2			0.428344952	0.000014219	-0.000000851		
3S1/2 -- (2)	14.676898	-49.588516	1.162217358	0.000106958		-0.000208923	-0.000000349
3P1/2			1.012778117	0.000052739	-0.000003985		
3P3/2			1.006329686	0.000060431	-0.000004439		
3D3/2			0.958372175	0.000033535	-0.000002842		
3D5/2			0.954820023	0.000032516	-0.000002848		
4S1/2			0.401007613	0.000003845	-0.000001151		
3P1/2 -- (2)	13.053175	-46.122985	1.115752223	0.000176414		-0.000001697	0.000000000
3P3/2			1.053742288	0.000032711	-0.000000001		
3D3/2			0.889075056	0.000069968	-0.000010319		
3D5/2			0.955072243	0.000020175	-0.000000330		
4S1/2			0.403783448	0.000004337	-0.000000488		
3P3/2 -- (4)	12.661581	-45.406372	1.065602776	0.000113243		-0.000000284	0.000000002
3D3/2			0.946477466	0.000025418	-0.000001259		
3D5/2			0.908635831	0.000051926	-0.000006032		
4S1/2			0.403381126	0.000005159	-0.000000567		
3D3/2 -- (4)	8.022316	-34.696570	0.855150066	0.000085589		-0.000000000	0.000000000
3D5/2			0.861402298	0.000015485	-0.000000000		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CDBALT	3D7	Z=27 A=59 R=8.82815E-05 A.U.					
3D5/2 -- 4S1/2 (3)	7.933462	-34.482602	0.392133677 0.853124222	0.000001692 0.000075753	-0.000000001 0.000075753	-0.000000000	0.000000000
4S1/2 -- 4S1/2 (2)	1.217547	-12.069858	0.391747682 0.308496366	0.000002338 0.000001527	-0.000000001 0.000001527	-0.000012837	-0.000000021
ETOT	-1391.46657	1410.39578	-3335.77312	533.41291	0.583551591	-0.052183645	-0.033450123
						-0.000054596	
NICKEL	3D8	Z=28 A=58 R=8.77799E-05 A.U.					
1S1/2 -- (2)	389.301720	-785.294000	17.368315951	0.279240992		-0.017437447	-0.000019981
2S1/2			4.958898652	0.011759865	-0.001278570		
2P1/2			5.725328737	0.023248195	-0.003630149		
2P3/2			5.625114410	0.012472837	-0.003599209		
3S1/2			1.760881599	0.001711407	-0.000197103		
3P1/2			1.752693809	0.002889758	-0.000453776		
3P3/2			1.725869065	0.001526542	-0.000451039		
3D3/2			1.362248024	0.000024640	-0.000003278		
3D5/2			1.352986398	0.000010264	-0.000003266		
4S1/2			0.451592631	0.000101214	-0.000011731		
2S1/2 -- (2)	73.126759	-170.352227	3.688640777	0.003559577		-0.001666356	-0.000001975
2P1/2			3.547779079	0.001137957	-0.000013089		
2P3/2			3.522480496	0.001987690	-0.000017276		
3S1/2			1.543463573	0.000279530	-0.000066095		
3P1/2			1.548187476	0.000322165	-0.000049807		
3P3/2			1.530166595	0.000373886	-0.000045867		
3D3/2			1.319280783	0.000166544	-0.000023067		
3D5/2			1.311030895	0.000073554	-0.000022795		
4S1/2			0.439106850	0.000016470	-0.000004021		
2P1/2 -- (2)	72.560106	-169.226106	4.281854014	0.007846992		-0.000015299	0.000000011
2P3/2			4.049988921	0.001399333	-0.000000029		
3S1/2			1.601937302	0.000201373	-0.000014852		
3P1/2			1.535948371	0.000386209	-0.000052547		
3P3/2			1.566435639	0.000180630	-0.000004649		
3D3/2			1.312917434	0.000485657	-0.000114670		
3D5/2			1.327580578	0.000015550	-0.000003492		
4S1/2			0.442340077	0.000011758	-0.000000911		
2P3/2 -- (4)	70.113453	-165.714622	4.083969317	0.005033447		-0.000002536	0.000000018
3S1/2			1.599154170	0.000270869	-0.000015357		
3P1/2			1.582230173	0.000146778	-0.000004946		
3P3/2			1.539271671	0.000358246	-0.000027698		
3D3/2			1.332793731	0.000141350	-0.000014651		
3D5/2			1.312509768	0.000246437	-0.000069476		
4S1/2			0.442179389	0.000015649	-0.000000938		
3S1/2 -- (2)	16.094538	-53.835421	1.215175304	0.000122598		-0.000246315	-0.000000293
3P1/2			1.060882892	0.000059692	-0.000004400		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-V-P)
NICKEL 308 Z=28 A=58 R=8.77799E-05 A.U.							
3P3/2			1.053566862	0.000069381	-0.000004958		
3D3/2			1.010411262	0.000038684	-0.000003206		
3D5/2			1.006299769	0.000038054	-0.000003215		
4S1/2			0.414558420	0.000004248	-0.000001266		
3P1/2 -- (2)	14.384217	-50.216443	1.170632419	0.000203885		-0.000002191	0.000000002
3P3/2			1.105028347	0.000037653	-0.000000002		
3D3/2			0.938678746	0.000080921	-0.000011705		
3D5/2			1.007953765	0.000023816	-0.000000375		
4S1/2			0.417484909	0.000004751	-0.000000530		
3P3/2 -- (4)	13.917095	-49.369648	1.116883308	0.000130459		-0.000000362	0.000000003
3D3/2			0.998736273	0.000029408	-0.000001420		
3D5/2			0.938484044	0.000060424	-0.000006813		
4S1/2			0.417046307	0.000005682	-0.000000554		
3D3/2 -- (4)	9.010710	-38.153254	0.907408271	0.000102135		-0.000000000	0.000000000
3D5/2			0.913721704	0.000018478	-0.000000000		
4S1/2			0.406298051	0.000001894	-0.000000002		
3D5/2 -- (4)	8.900897	-37.893544	0.904613766	0.000090241		-0.000000000	0.000000000
4S1/2			0.405869372	0.000002610	-0.000000002		
4S1/2 -- (2)	1.286577	-12.912200	0.318321499	0.000001674		-0.000014594	-0.000000017
ETOT	-1518.69890	1541.27645	-3648.19706	587.65932	0.660914200	-0.059707514	-0.038775996
							-0.000044424
COPPER 451 Z=29 A=63 R=9.02331E-05 A.U.							
1S1/2 -- (2)	419.095048	-844.222369	18.022211548	0.311098088		-0.020086817	-0.000012971
2S1/2			5.164356454	0.013230407	-0.001442228		
2P1/2			5.972004473	0.026264073	-0.004096033		
2P3/2			5.859802909	0.014066774	-0.004059897		
3S1/2			1.832276026	0.001921185	-0.000221940		
3P1/2			1.825641791	0.003252487	-0.000510113		
3P3/2			1.794905720	0.001713470	-0.000506532		
3D3/2			1.372518309	0.000027150	-0.000003610		
3D5/2			1.359474370	0.000011251	-0.000003582		
4S1/2			0.431153724	0.000090181	-0.000010482		
2S1/2 -- (2)	79.497966	-184.019840	3.842068911	0.004028428		-0.001941801	-0.000001344
2P1/2			3.699300649	0.001283492	-0.000013829		
2P3/2			3.671000936	0.002248509	-0.000018801		
3S1/2			1.606329153	0.000315944	-0.000074839		
3P1/2			1.612783903	0.000369359	-0.000057230		
3P3/2			1.592084813	0.000423709	-0.000052359		
3D3/2			1.329512056	0.000180132	-0.000024941		
3D5/2			1.317712561	0.000079292	-0.000024538		
4S1/2			0.420842754	0.000014778	-0.000003610		
2P1/2 -- (2)	78.968448	-182.937504	4.469544332	0.008901951		-0.000019372	0.000000027
2P3/2			4.225077259	0.001583798	-0.000000039		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZINC	4S2	Z=30 A=64 R=9.07080E-05 A.U.					
			1.883268145	0.001956252	-0.000578591		
			1.514265422	0.000035083	-0.000004662		
			1.501852452	0.000014562	-0.000004639		
			0.478588328	0.000120076	-0.000014001		
2S1/2 -- (2)	86.136564	-198.223068	3.995487420	0.004535948		-0.002250265	-0.000000419
			3.850693339	0.001440939	-0.000014616		
			3.819161149	0.002529866	-0.000020491		
			1.677508094	0.000360025	-0.000085457		
			1.691693840	0.000429648	-0.000066719		
			1.668802525	0.000487928	-0.000060713		
			1.463690275	0.000227825	-0.000031558		
			1.452684568	0.000100644	-0.000031120		
			0.465851720	0.000019798	-0.000004849		
2P1/2 -- (2)	85.639596	-197.177296	4.656887395	0.010043873		-0.000024313	0.000000051
			4.399560071	0.001782558	-0.000000050		
			1.742158291	0.000257598	-0.000018985		
			1.679363478	0.000501526	-0.000069134		
			1.709521831	0.000233681	-0.000006080		
			1.456982055	0.000666276	-0.000157395		
			1.472404153	0.000021448	-0.000004785		
			0.469191998	0.000014049	-0.000001089		
2P3/2 -- (4)	82.333695	-192.463709	4.431277123	0.006407220		-0.000003926	0.000000039
			1.738663778	0.000346748	-0.000019716		
			1.729648964	0.000190283	-0.000006530		
			1.679303388	0.000461780	-0.000036233		
			1.479797486	0.000194217	-0.000020101		
			1.454786831	0.000337344	-0.000095127		
			0.469003555	0.000018704	-0.000001124		
3S1/2 -- (2)	19.118466	-62.839644	1.320817228	0.000158162		-0.000335877	-0.000000065
			1.156807505	0.000075354	-0.000005308		
			1.147522602	0.000089719	-0.000006129		
			1.112576565	0.000050359	-0.000004016		
			1.107155829	0.000050702	-0.000004033		
			0.440872864	0.000005111	-0.000001511		
3P1/2 -- (2)	17.232540	-58.905168	1.280043293	0.000266814		-0.000003547	0.000000007
			1.207026930	0.000048853	-0.000000003		
			1.036278741	0.000105920	-0.000014822		
			1.111714704	0.000032187	-0.000000476		
			0.444068427	0.000005630	-0.000000621		
3P3/2 -- (4)	16.582233	-57.745364	1.218620974	0.000169565		-0.000000570	0.000000006
			1.101247802	0.000038458	-0.000001778		
			1.056102426	0.000079781	-0.000008549		
			0.443551691	0.000006801	-0.000000653		
3D3/2 -- (4)	11.120261	-45.441628	1.009485504	0.000140492		-0.000000000	0.000000000
			1.015713374	0.000025397	-0.000000000		
			0.433539421	0.000002325	-0.000000003		
3D5/2 -- (6)	10.957848	-45.068642	1.004790286	0.000123664		-0.000000000	0.000000000
			0.433013378	0.000003192	-0.000000002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
COPPER 4S1 Z=29 A=63 R=9.02331E-05 A.U.							
3S1/2			1.667495340	0.000226791	-0.000016715		
3P1/2			1.600610893	0.000436778	-0.000059812		
3P3/2			1.630161134	0.000203770	-0.000005271		
3D3/2			1.323480263	0.000525933	-0.000124184		
3D5/2			1.334340622	0.000016810	-0.000003764		
4S1/2			0.423534799	0.000010519	-0.000000814		
2P3/2 -- (4)	76.116166	-178.858026	4.258077255	0.005694714		-0.000003169	0.000000027
3S1/2			1.664391238	0.000305227	-0.000017320		
3P1/2			1.648425347	0.000165859	-0.000005638		
3P3/2			1.601789623	0.000403427	-0.000031418		
3D3/2			1.343139767	0.000153163	-0.000015862		
3D5/2			1.319350822	0.000265705	-0.000074899		
4S1/2			0.423392386	0.000014011	-0.000000839		
3S1/2 -- (2)	17.450518	-58.051914	1.263753348	0.000138132		-0.000286510	-0.000000200
3P1/2			1.103899655	0.000066639	-0.000004834		
3P3/2			1.095492141	0.000078088	-0.000005506		
3D3/2			1.022164078	0.000041532	-0.000003423		
3D5/2			1.015826086	0.000040678	-0.000003425		
4S1/2			0.400342393	0.000003785	-0.000001105		
3P1/2 -- (2)	15.614551	-54.187922	1.218366007	0.000230199		-0.000002771	0.000000004
3P3/2			1.149389649	0.000042288	-0.000000002		
3D3/2			0.951041571	0.000087527	-0.000012682		
3D5/2			1.017809480	0.000025428	-0.000000402		
4S1/2			0.402844530	0.000004211	-0.000000462		
3P3/2 -- (4)	15.057916	-53.183728	1.160870911	0.000146666		-0.000000451	0.000000004
3D3/2			1.010276600	0.000031626	-0.000001530		
3D5/2			0.968096700	0.000064819	-0.000007340		
4S1/2			0.402436377	0.000005068	-0.000000485		
3D3/2 -- (4)	9.334746	-39.813983	0.896332705	0.000104958		-0.000000000	0.000000000
3D5/2			0.900707996	0.000018803	-0.000000000		
4S1/2			0.389405828	0.000001637	-0.000000000		
3D5/2 -- (6)	9.182238	-39.435230	0.890121957	0.000092030		-0.000000000	0.000000000
4S1/2			0.388720994	0.000002293	-0.000000000		
4S1/2 -- (1)	1.111398	-12.733930	0.000000000	0.000000000		-0.000013474	-0.000000009
ETOT	-1652.75662	1679.49320	-3983.60736	650.72552	0.744694399	-0.067933375	-0.044702500 -0.000028854
ZINC 4S2 Z=30 A=64 R=9.07080E-05 A.U.							
1S1/2 -- (2)	450.083934	-905.417087	18.677992973	0.345305733		-0.023031685	-0.000003048
2S1/2			5.369930889	0.014813809	-0.001618989		
2P1/2			6.218577279	0.029517259	-0.004597497		
2P3/2			6.093470318	0.015781490	-0.004555509		
3S1/2			1.915047456	0.002175499	-0.000252048		
3P1/2			1.917486001	0.003718843	-0.000582512		

de

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZINC 4S2 Z=30 A=64 R=9.07080E-05 A.U.							
4S1/2 -- (2)	1.427210	-14.654679	0.337271584	0.000001982		-0.000018574	-0.000000004
ETOT	-1793.84105	1825.16847	-4327.44854	707.73023	0.837189792	-0.077036375	-0.051346508
GALLIUM 4P1 Z=31 A=69 R=9.30112E-05 A.U.							
1S1/2 -- (2)	482.301965	-968.917181	19.336212451	0.381973354		-0.026295092	0.000010368
2S1/2			5.576349385	0.016525732	-0.001810077		
2P1/2			6.466271977	0.033032241	-0.005138134		
2P3/2			6.327269804	0.017629166	-0.005089602		
3S1/2			2.000170621	0.002457307	-0.000285492		
3P1/2			2.012833278	0.004241908	-0.000663556		
3P3/2			1.975000756	0.002228569	-0.000659443		
3D3/2			1.653266752	0.000044458	-0.000005903		
3D5/2			1.640811385	0.000018467	-0.000005886		
4S1/2			0.546340247	0.000170867	-0.000019985		
4P1/2			0.375527067	0.000129248	-0.000020229		
2S1/2 -- (2)	93.073134	-212.997899	4.149443875	0.005085994		-0.002595231	0.000000862
2P1/2			4.002644678	0.001611366	-0.000015422		
2P3/2			3.967630657	0.002833895	-0.000022330		
3S1/2			1.750397102	0.000409100	-0.000097296		
3P1/2			1.773201743	0.000498064	-0.000077497		
3P3/2			1.748086682	0.000560243	-0.000070147		
3D3/2			1.594714711	0.000282928	-0.000039208		
3D5/2			1.583873664	0.000125317	-0.000038721		
4S1/2			0.529486619	0.000028337	-0.000006961		
4P1/2			0.368325890	0.000015595	-0.000002472		
2P1/2 -- (2)	92.609592	-211.989092	4.844915019	0.011282520		-0.000030284	0.000000085
2P3/2			4.574393097	0.001997169	-0.000000065		
3S1/2			1.818709223	0.000291837	-0.000021511		
3P1/2			1.760696247	0.000574404	-0.000079672		
3P3/2			1.791621869	0.000267313	-0.000006992		
3D3/2			1.587358981	0.000828779	-0.000195875		
3D5/2			1.606859440	0.000026839	-0.000005968		
4S1/2			0.533922303	0.000020046	-0.000001558		
4P1/2			0.368044981	0.000017202	-0.000002496		
2P3/2 -- (4)	88.796837	-206.568625	4.604516792	0.007176506		-0.000004825	0.000000054
3S1/2			1.814782427	0.000392836	-0.000022389		
3P1/2			1.813594259	0.000217726	-0.000007540		
3P3/2			1.759406547	0.000527290	-0.000041669		
3D3/2			1.613434814	0.000241806	-0.000025011		
3D5/2			1.586477933	0.000420175	-0.000118530		
4S1/2			0.533655716	0.000026671	-0.000001611		
4P1/2			0.369527760	0.000006564	-0.000000245		
3S1/2 -- (2)	20.919171	-67.904187	1.379572840	0.000180762		-0.000392431	0.000000127

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GALLIUM 4P1 Z=31 A=69 R=9.30112E-05 A.U.							
3P1/2			1.211556530	0.000085050	-0.000005809		
3P3/2			1.201383807	0.000102910	-0.000006805		
3D3/2			1.199921565	0.000060077	-0.000004623		
3D5/2			1.194963353	0.000062124	-0.000004656		
4S1/2			0.497005651	0.000007388	-0.000002221		
4P1/2			0.355281252	0.000002046	-0.000000296		
3P1/2 -- (2)	18.996788	-63.928056	1.344217402	0.000308758		-0.000004514	0.000000013
3P3/2			1.266996079	0.000056355	-0.000000004		
3D3/2			1.119512254	0.000126167	-0.000016999		
3D5/2			1.202716146	0.000040048	-0.000000553		
4S1/2			0.501335863	0.000008051	-0.000000895		
4P1/2			0.351823060	0.000004240	-0.000000663		
3P3/2 -- (4)	18.242658	-62.598627	1.278738370	0.000195769		-0.000000716	0.000000008
3D3/2			1.189775552	0.000046034	-0.000002026		
3D5/2			1.141472039	0.000096607	-0.000009755		
4S1/2			0.500644228	0.000009756	-0.000000945		
4P1/2			0.355332465	0.000001662	-0.000000067		
3D3/2 -- (4)	13.047240	-51.268012	1.119767456	0.000182781		-0.000000000	0.000000000
3D5/2			1.127497940	0.000033298	-0.000000000		
4S1/2			0.492643880	0.000003505	-0.000000012		
4P1/2			0.349757231	0.000003027	-0.000000113		
3D5/2 -- (6)	12.868590	-50.881150	1.115942510	0.000161244		-0.000000000	0.000000000
4S1/2			0.492154352	0.000004696	-0.000000012		
4P1/2			0.351996859	0.000001340	-0.000000004		
4S1/2 -- (2)	1.961212	-17.346194	0.385487626	0.000003018		-0.000027344	0.000000009
4P1/2			0.275744255	0.000002461	-0.000000351		
4P1/2 -- (1)	0.880122	-11.688108	0.000000000	0.000000000		-0.000000139	0.000000000
ETOT	-1941.71718	1978.16232	-4684.88128	764.20973	0.937746890	-0.087010701	-0.058712099
GERMANIUM 4P2 Z=32 A=74 R=9.52057E-05 A.U.							
1S1/2 -- (2)	515.764643	-1034.743739	19.996409973	0.421190324		-0.029900983	0.000027925
2S1/2			5.783650915	0.018365359	-0.002016115		
2P1/2			6.715117589	0.036819204	-0.005719280		
2P3/2			6.561192701	0.019614253	-0.005663459		
3S1/2			2.087967550	0.002770168	-0.000322706		
3P1/2			2.111721263	0.004828178	-0.000754210		
3P3/2			2.070070881	0.002533741	-0.000750080		
3D3/2			1.785623553	0.000055187	-0.000007321		
3D5/2			1.772558071	0.000022926	-0.000007311		
4S1/2			0.606408790	0.000226373	-0.000026557		
4P1/2			0.447718993	0.000206957	-0.000032348		
2S1/2 -- (2)	100.312823	-228.351300	4.303974309	0.005680603		-0.002979795	0.000002571
2P1/2			4.155182338	0.001795383	-0.000016250		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GERMANIUM	4P2	Z=32 A=74 R=9.52057E-05 A.U.					
2P3/2			4.116427371	0.003161472	-0.000024337		
3S1/2			1.825195298	0.000463827	-0.000110523		
3P1/2			1.857267361	0.000575631	-0.000089730		
3P3/2			1.829848849	0.000641588	-0.000080790		
3D3/2			1.718985273	0.000344568	-0.000047772		
3D5/2			1.707784996	0.000152916	-0.000047217		
4S1/2			0.585594715	0.000037750	-0.000009302		
4P1/2			0.436971048	0.000025388	-0.000004035		
2P1/2 -- (2)	99.882057	-227.378169	5.033650658	0.012622274		-0.000037459	0.000000133
2P3/2			4.749586095	0.002228195	-0.000000083		
3S1/2			1.897379260	0.000329958	-0.000024328		
3P1/2			1.844571847	0.000656362	-0.000091579		
3P3/2			1.876385362	0.000305092	-0.000008022		
3D3/2			1.711044968	0.001010993	-0.0000239052		
3D5/2			1.734088925	0.000032908	-0.000007295		
4S1/2			0.591089186	0.000026629	-0.000002075		
4P1/2			0.436585599	0.000027619	-0.000004042		
2P3/2 -- (4)	95.505122	-221.172552	4.777796322	0.008004615		-0.000005887	0.000000074
3S1/2			1.892973065	0.000444073	-0.000025379		
3P1/2			1.900229806	0.000248536	-0.000008684		
3P3/2			1.842013104	0.000600748	-0.000047801		
3D3/2			1.740350849	0.000295229	-0.000030518		
3D5/2			1.710908784	0.000512885	-0.000144739		
4S1/2			0.590737899	0.000035397	-0.000002150		
4P1/2			0.438766626	0.000010533	-0.000000399		
3S1/2 -- (2)	22.870198	-73.268286	1.440144020	0.000206328		-0.000457256	0.000000391
3P1/2			1.268138306	0.000095827	-0.000006332		
3P3/2			1.257039965	0.000117868	-0.000007536		
3D3/2			1.282615641	0.000070509	-0.000005222		
3D5/2			1.277766770	0.000074776	-0.000005271		
4S1/2			0.546207251	0.000009952	-0.000003044		
4P1/2			0.417870452	0.000003446	-0.000000515		
3P1/2 -- (2)	20.919874	-69.269734	1.410719153	0.000356723		-0.000005715	0.000000020
3P3/2			1.329121527	0.000064907	-0.000000006		
3D3/2			1.199222162	0.000147968	-0.000019151		
3D5/2			1.289160086	0.000048911	-0.000000630		
4S1/2			0.551666870	0.000010737	-0.000001204		
4P1/2			0.413042619	0.000006888	-0.000001124		
3P3/2 -- (4)	20.049800	-67.753548	1.341012927	0.000225688		-0.000000895	0.000000011
3D3/2			1.274154459	0.000054229	-0.000002266		
3D5/2			1.222708673	0.000115062	-0.000010923		
4S1/2			0.550804256	0.000013053	-0.000001276		
4P1/2			0.418010264	0.000002705	-0.000000115		
3D3/2 -- (4)	15.057679	-57.160072	1.223053847	0.000230628		-0.000000001	0.000000000
3D5/2			1.231931156	0.000042277	-0.000000000		
4S1/2			0.544776654	0.000004871	-0.000000029		
4P1/2			0.412208342	0.000005052	-0.000000220		
3D5/2 -- (6)	14.855877	-56.741049	1.219538199	0.000203653		-0.000000000	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GERMANIUM	4P2	Z=32 A=74 R=9.52057E-05 A.U.					
4S1/2 -- (2)	2.512517	-19.931737	0.544284068 0.414800867 0.427073580 0.318548631 0.309009848	0.000006398 0.000002192 0.000004189 0.000003585 0.000003237	-0.000000028 -0.000000010 -0.000000000 -0.000000501 -0.000000000	-0.000037449	0.000000032
4P1/2 -- (2)	1.324261	-14.399897				-0.000000249	0.000000001
ETOT	-2096.53065	2138.75841	-5059.47671	823.30547	1.046890424	-0.097910245	-0.066864943
ARSENIC	4P3	Z=33 A=75 R=9.56326E-05 A.U.					
1S1/2 -- (2)	550.491758	-1102.922526	20.660209631 5.991912594 6.965237938 6.795317930 2.177870637 2.213195415 2.167472247 1.913382961 1.899404950 0.664008767 0.513564381 0.500850137	0.463050849 0.020340356 0.040890131 0.021742070 0.003115026 0.005478797 0.002872192 0.000067352 0.000027975 0.000289150 0.000297484 0.000153126	-0.002237802 -0.006342527 -0.006278620 -0.000363824 -0.000854595 -0.000850635 -0.00008927 -0.00008926 -0.000034021 -0.000046431 -0.000045467	-0.033874900	0.000050347
2S1/2 -- (2)	107.862718	-244.292420	4.459134105 4.308371640 4.265604841 1.901477904 1.943151064 1.913309243 1.838569682 1.826743098 0.639168266 0.499127522 0.487495927	0.006322001 0.001993661 0.003513595 0.000524436 0.000662744 0.000732157 0.000413046 0.000183592 0.000048475 0.000037069 0.000039376	-0.000017100 -0.000026526 -0.000125201 -0.000103482 -0.000092674 -0.000057291 -0.000056656 -0.000011980 -0.000005907 -0.000005227	-0.003407325	0.000004788
2P1/2 -- (2)	107.463920	-243.353608	5.223186698 4.925212164 1.977707825 1.930264176 1.962992836 1.830103345 1.856410468 0.645742690 0.498652991 0.490079673	0.014068202 0.002476296 0.000372110 0.000747649 0.000347095 0.001213867 0.000039691 0.000034103 0.000039806 0.000018423	-0.000000105 -0.000027447 -0.000104904 -0.000009171 -0.000287154 -0.000008773 -0.000002665 -0.000005875 -0.000000529	-0.000046033	0.000000198
2P3/2 -- (4)	102.460941	-236.278548	4.951177186 1.972773628	0.008893948 0.000500636	-0.000028701	-0.000007135	0.000000101

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ARSENIC	4P3	Z=33 A=75 R=9.56326E-05 A.U.					
			3P1/2	1.988777276	0.000282788	-0.000009967	
			3P3/2	1.926329945	0.000682277	-0.000054648	
			3D3/2	1.862602292	0.000354768	-0.000036649	
			3D5/2	1.830395682	0.000615997	-0.000173903	
			4S1/2	0.645296146	0.000045284	-0.000002766	
			4P1/2	0.501539382	0.000015171	-0.000000583	
			4P3/2	0.488269147	0.000035647	-0.000003018	
3S1/2 -- (2)	24.966201	-78.920144	1.502088472	0.000234976		-0.000531085	0.000000741
			3P1/2	1.326042033	0.000107701	-0.000006876	
			3P3/2	1.313962071	0.000134642	-0.000008323	
			3D3/2	1.362382095	0.000081757	-0.000005819	
			3D5/2	1.357477450	0.000088756	-0.000005886	
			4S1/2	0.593013154	0.000012929	-0.000004018	
			4P1/2	0.473952763	0.000005213	-0.000000801	
			4P3/2	0.463413184	0.000007838	-0.000000698	
3P1/2 -- (2)	22.992316	-74.908810	1.478825476	0.000410879		-0.000007192	0.000000031
			3P3/2	1.392708909	0.000074520	-0.000000008	
			3D3/2	1.276761171	0.000171555	-0.000021310	
			3D5/2	1.372796479	0.000058834	-0.000000709	
			4S1/2	0.599641665	0.000013815	-0.000001562	
			4P1/2	0.467867111	0.000010052	-0.000001702	
			4P3/2	0.464312001	0.000004549	-0.000000154	
3P3/2 -- (4)	21.992599	-73.186084	1.404717611	0.000259389		-0.000001112	0.000000016
			3D3/2	1.355901385	0.000063114	-0.000002501	
			3D5/2	1.301399921	0.000135317	-0.000012071	
			4S1/2	0.598600726	0.000016852	-0.000001662	
			4P1/2	0.474221155	0.000003955	-0.000000175	
			4P3/2	0.460433923	0.000008991	-0.000000872	
3D3/2 -- (4)	17.156074	-63.165432	1.321684531	0.000284331		-0.000000001	0.000000000
			3D5/2	1.331520442	0.000052388	-0.000000000	
			4S1/2	0.594431612	0.000006475	-0.000000052	
			4P1/2	0.468558604	0.000007500	-0.000000359	
			4P3/2	0.461162340	0.000002896	-0.000000048	
3D5/2 -- (6)	16.925968	-62.703016	1.318200839	0.000251177		-0.000000000	0.000000000
			4S1/2	0.593915142	0.000008372	-0.000000050	
			4P1/2	0.471452053	0.000003219	-0.000000017	
			4P3/2	0.459403773	0.000006409	-0.000000206	
4S1/2 -- (2)	3.107297	-22.565850	0.466333391	0.000005567		-0.000049414	0.000000069
			4P1/2	0.357119023	0.000004819	-0.000000660	
			4P3/2	0.352229944	0.000003054	-0.000000692	
4P1/2 -- (2)	1.808730	-17.049728	0.353583095	0.000004904		-0.000000397	0.000000002
			4P3/2	0.331720667	0.000000895	-0.000000000	
4P3/2 -- (1)	1.707702	-16.616923	0.000000000	0.000000000		-0.000000060	0.000000001
ETOT	-2258.41685	2307.08785	-5451.38145	884.89744	1.164843327	-0.109783010	-0.075865747

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SELENIUM 4P4 Z=34 A=80 R=9.77122E-05 A.U.							
1S1/2 -- (2)	586.500941	-1173.476742	21.326191747	0.507647103		-0.038242268	0.000078444
2S1/2			6.201189200	0.022456308	-0.002475829		
2P1/2			7.216723714	0.045256806	-0.007009424		
2P3/2			7.029691311	0.024017748	-0.006936581		
3S1/2			2.269466249	0.003492906	-0.000408991		
3P1/2			2.316620429	0.006195307	-0.000964885		
3P3/2			2.266536381	0.003244577	-0.000961308		
3D3/2			2.037782196	0.000081041	-0.000010731		
3D5/2			2.022675873	0.000033648	-0.000010741		
4S1/2			0.719127966	0.000358505	-0.000042302		
4P1/2			0.574619238	0.000399507	-0.000062262		
4P3/2			0.560001471	0.000205558	-0.000061070		
2S1/2 -- (2)	115.729339	-260.829737	4.614962039	0.007012427		-0.003881250	0.000007605
2P1/2			4.462258992	0.002206867	-0.000017970		
2P3/2			4.415197680	0.003891240	-0.000028915		
3S1/2			1.978939259	0.000591171	-0.000141390		
3P1/2			2.030368611	0.000759841	-0.000118825		
3P3/2			1.997959210	0.000832189	-0.000105833		
3D3/2			1.954717949	0.000488689	-0.000067811		
3D5/2			1.942082648	0.000217499	-0.000067082		
4S1/2			0.690287578	0.000060409	-0.000014971		
4P1/2			0.556458505	0.000050527	-0.000008070		
4P3/2			0.543245360	0.000053196	-0.000007112		
2P1/2 -- (2)	115.361541	-259.923835	5.413589124	0.015625358		-0.000056228	0.000000285
2P3/2			5.101319142	0.002742112	-0.000000132		
3S1/2			2.059361754	0.000418449	-0.000030880		
3P1/2			2.017297614	0.000848576	-0.000119704		
3P3/2			2.050906958	0.000393428	-0.000010443		
3D3/2			1.945779719	0.001438430	-0.000340426		
3D5/2			1.975152804	0.000047224	-0.000010411		
4S1/2			0.697938293	0.000042394	-0.000003323		
4P1/2			0.555912987	0.000053598	-0.000007973		
4P3/2			0.546513114	0.000024809	-0.000000719		
2P3/2 -- (4)	109.665933	-251.888769	5.124695406	0.009846826		-0.000008594	0.000000134
3S1/2			2.053849535	0.000562715	-0.000032370		
3P1/2			2.078723847	0.000320582	-0.000011395		
3P3/2			2.011837766	0.000772051	-0.000062233		
3D3/2			1.981431205	0.000420732	-0.000043435		
3D5/2			1.946266207	0.000730033	-0.000206172		
4S1/2			0.697387085	0.000056225	-0.000003454		
4P1/2			0.559489897	0.000020413	-0.000000794		
4P3/2			0.544229230	0.000047876	-0.000004091		
3S1/2 -- (2)	27.203378	-84.851326	1.565095320	0.000266838		-0.000614684	0.000001197
3P1/2			1.384929768	0.000120702	-0.000007438		
3P3/2			1.371801542	0.000153290	-0.000009168		
3D3/2			1.440168075	0.000093907	-0.000006418		
3D5/2			1.435105421	0.000104154	-0.000006506		
4S1/2			0.637644048	0.000016302	-0.000005139		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SELENIUM 4P4 Z=34 A=80 R=9.77122E-05 A.U.							
4P1/2			0.525365287	0.000007360	-0.000001156		
4P3/2			0.513520743	0.000010873	-0.000001000		
3P1/2 -- (2)	25.207769	-80.831171	1.548076012	0.000471446		-0.000008996	0.000000045
3P3/2			1.457316003	0.000085215	-0.000000010		
3D3/2			1.352837127	0.000197120	-0.000023498		
3D5/2			1.454529319	0.000069876	-0.000000789		
4S1/2			0.645450397	0.000017258	-0.000001966		
4P1/2			0.518151258	0.000013708	-0.000002397		
4P3/2			0.514750387	0.000006210	-0.000000219		
3P3/2 -- (4)	24.063288	-78.879885	1.469390735	0.000296970		-0.000001372	0.000000021
3D3/2			1.435827244	0.000072747	-0.000002734		
3D5/2			1.378348634	0.000157510	-0.000013211		
4S1/2			0.644225485	0.000021126	-0.000002101		
4P1/2			0.525794890	0.000005400	-0.000000249		
4P3/2			0.510022446	0.000012225	-0.000001228		
3D3/2 -- (4)	19.345965	-69.312370	1.416967617	0.000344198		-0.000000001	0.000000000
3D5/2			1.427634139	0.000063686	-0.000000000		
4S1/2			0.641837202	0.000008301	-0.000000081		
4P1/2			0.520502752	0.000010332	-0.000000524		
4P3/2			0.512077951	0.000004013	-0.000000071		
3D5/2 -- (6)	19.082775	-68.797361	1.413330921	0.000304084		-0.000000000	0.000000000
4S1/2			0.641285138	0.000010604	-0.000000080		
4P1/2			0.523666156	0.000004411	-0.000000026		
4P3/2			0.510126978	0.000008778	-0.000000300		
4S1/2 -- (2)	3.736406	-25.238489	0.503549888	0.000007144		-0.0000063248	0.000000123
4P1/2			0.392642585	0.000006149	-0.000000827		
4P3/2			0.387235325	0.000004018	-0.000000879		
4P1/2 -- (2)	2.326471	-19.670838	0.394468992	0.000006886		-0.000000590	0.000000003
4P3/2			0.369825304	0.000001254	-0.000000000		
4P3/2 -- (2)	2.193874	-19.155760	0.371739599	0.000004257		-0.000000089	0.000000001
ETOT	-2427.45983	2483.31683	-5861.06407	949.20358	1.292102813	-0.122678807	-0.085774580 0.000176029
BROMINE 4P5 Z=35 A=79 R=9.73034E-05 A.U.							
1S1/2 -- (2)	623.815271	-1246.436306	21.994998454	0.555076869		-0.043032142	0.000113107
2S1/2			6.411538287	0.024719066	-0.002730921		
2P1/2			7.469668764	0.049931456	-0.007721538		
2P3/2			7.264358708	0.026446539	-0.007638849		
3S1/2			2.362457309	0.003904953	-0.000458362		
3P1/2			2.421579296	0.006979640	-0.001085318		
3P3/2			2.366822027	0.003651767	-0.001082366		
3D3/2			2.159698535	0.000096339	-0.000012744		
3D5/2			2.143289725	0.000039981	-0.000012768		
4S1/2			0.772647208	0.000434967	-0.000051467		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BROMINE	4P5	Z=35 A=79 R=9.73034E-05 A.U.					
2S1/2 -- (2)	123.919830	-277.972518	0.632636356 0.615717861 4.771493863 4.616887789 4.565236486 2.057360585 2.118606346 2.083468371 2.068315852 2.054730552 0.739811729 0.610711964 0.595579040	0.000513740 0.000263755 0.007754196 0.002435699 0.004295399 0.000664296 0.000867392 0.000941961 0.000571844 0.000254794 0.000073655 0.000065895 0.000068658	-0.000079940 -0.000078404 -0.000018859 -0.000031522 -0.000159160 -0.000135834 -0.000120306 -0.000079379 -0.000078545 -0.000018303 -0.000010547 -0.000009239	-0.004405447	0.000011123
2P1/2 -- (2)	123.581790	-277.097844	5.604919112 5.277949458 2.142102787 2.105362539 2.139777232 2.058955404 2.091238354 0.748540519 0.610111960 0.599535986 5.298380400 2.135960516 2.169734591 2.098196640 2.097716788 2.059440425 0.747874364 0.614365546 0.596774693	0.017299014 0.003026291 0.000469146 0.000959510 0.000444221 0.001685765 0.000055544 0.000051570 0.000069104 0.000031929 0.010865616 0.000630517 0.000362032 0.000870297 0.000493444 0.000855937 0.000068305 0.000026297 0.000061455	-0.000000166 -0.000034640 -0.000136041 -0.000011843 -0.000399128 -0.000012216 -0.000004055 -0.000010356 -0.000000934	-0.000068297	0.000000400
2P3/2 -- (4)	117.121933	-268.005549	2.135960516 2.169734591 2.098196640 2.097716788 2.059440425 0.747874364 0.614365546 0.596774693 1.628947264 1.444578529 1.430328313 1.516592410 1.511300254 0.680889067 0.573828305 0.560406039	0.010865616 0.000630517 0.000362032 0.000870297 0.000493444 0.000855937 0.000068305 0.000026297 0.000061455 0.000302058 0.000134867 0.000173884 0.000107043 0.000121060 0.000020108 0.000009935 0.000014390	-0.000036403 -0.000012975 -0.000070582 -0.000050908 -0.000241700 -0.000004222 -0.000001036 -0.000005297	-0.000010291	0.000000176
3S1/2 -- (2)	29.579343	-91.056248	1.628947264 1.444578529 1.430328313 1.516592410 1.511300254 0.680889067 0.573828305 0.560406039 1.618179249 1.522661601 1.427910002 1.534942392 0.689882175 0.565588011 0.561996737 1.534738609	0.000302058 0.000134867 0.000173884 0.000107043 0.000121060 0.000020108 0.000009935 0.000014390 0.000538689 0.000097021 0.000224840 0.000082098 0.000021096 0.000017897 0.000008096 0.000338560	-0.000008018 -0.000010074 -0.000007024 -0.000007136 -0.000006421 -0.000001589 -0.000001361	-0.0000708913	0.000001781
3P1/2 -- (2)	27.562343	-87.027998	1.618179249 1.522661601 1.427910002 1.534942392 0.689882175 0.565588011 0.561996737 1.534738609	0.000538689 0.000097021 0.000224840 0.000082098 0.000021096 0.000017897 0.000008096 0.000338560	-0.000000013 -0.000025732 -0.000000872 -0.000002421 -0.000003218 -0.000000295	-0.000011182	0.000000065
3P3/2 -- (4)	26.256594	-84.824057				-0.000001683	0.000000029

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BROMINE 4P5 Z=35 A=79 R=9.73034E-05 A.U.							
3D3/2 -- (4)	21.630844	-75.621513	1.514462727	0.000083183	-0.000002964	-0.000000002	0.000000000
3D5/2			1.454067845	0.000181775	-0.000014351		
4S1/2			0.688465145	0.000025916	-0.000002597		
4P1/2			0.574444940	0.000007058	-0.000000337		
4P3/2			0.556453102	0.000015887	-0.000001646		
3D3/2 -- (6)	21.329836	-75.045521	1.509809046	0.000410576	-0.000000000	0.000000000	
3D5/2			1.521210918	0.000076237	-0.000000000		
4S1/2			0.687790329	0.000010361	-0.000000117		
4P1/2			0.569658925	0.000013566	-0.000000716		
4P3/2			0.559916037	0.000005286	-0.000000097		
3D5/2 -- (2)	4.401052	-27.973688	1.505880335	0.000362672	-0.000000000	0.000000000	
4S1/2			0.687193867	0.000013112	-0.000000116		
4P1/2			0.573078110	0.000005781	-0.000000038		
4P3/2			0.557777159	0.000011459	-0.000000408		
4S1/2 -- (2)	2.875755	-22.310313	0.539492548	0.000008938	-0.000001002	0.000000199	
4P1/2			0.426276428	0.000007591	-0.000001077		
4P3/2			0.420227370	0.000005097	-0.000000838	0.000000005	
4P1/2 -- (2)	2.703302	-21.694253	0.432978512	0.000009210	-0.000000000	0.000000002	
4P3/2			0.405604348	0.000001670	-0.000000124	0.000000002	
4P3/2 -- (3)	2667.59717	-6288.91019	0.407522957	0.000005672	-0.136648891	-0.096660265	0.000254186
ETOT	-2603.78973		1016.32724	1.429100432			
KRYPTON 4P6 Z=36 A=84 R=9.93144E-05 A.U.							
1S1/2 -- (2)	662.453035	-1321.825184	22.666704180	0.605433384	-0.003003791	-0.048271685	0.000155337
2S1/2			6.622999009	0.027134295	-0.008480411		
2P1/2			7.724146593	0.054926183	-0.008386914		
2P3/2			7.499347675	0.029033557	-0.000512103		
3S1/2			2.456624206	0.004352351	-0.001216156		
3P1/2			2.527792445	0.007833980	-0.001214109		
3P3/2			2.468029744	0.004094765	-0.000014976		
3D3/2			2.279712431	0.000113333	-0.000015019		
3D5/2			2.261847294	0.000047007	-0.000061565		
4S1/2			0.824997558	0.000518901	-0.000099560		
4P1/2			0.688577360	0.000640874	-0.000097664		
4P3/2			0.669281248	0.000328371	-0.004983680	0.000015458	
2S1/2 -- (2)	132.440596	-295.729137	4.928754592	0.008549619	-0.000019769		
2P1/2			4.772290687	0.002680853	-0.000034369		
2P3/2			4.715741927	0.004727050	-0.000178579		
3S1/2			2.136582979	0.000744086	-0.000154590		
3P1/2			2.207657764	0.000985913	-0.000136131		
3P3/2			2.169617613	0.001061779	-0.000092044		
3D3/2			2.179952762	0.000662852	-0.000091091		
3D5/2			2.165296795	0.000295631			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
KRYPTON	4P6	Z=36 A=84 R=9.93144E-05 A.U.					
4S1/2			0.788166087	0.000088289	-0.000021996		
4P1/2			0.662846603	0.000083311	-0.000013360		
4P3/2			0.645749183	0.000085940	-0.000011633		
2P1/2 -- (2)	132.131224	-294.884307	5.797225337	0.019094460		-0.000082519	0.000000549
2P3/2			5.455134328	0.003329466	-0.000000206		
3S1/2			2.225756685	0.000524382	-0.000038741		
3P1/2			2.194255685	0.001080859	-0.000153982		
3P3/2			2.229369883	0.000499619	-0.000013374		
3D3/2			2.170216492	0.001956930	-0.000463512		
3D5/2			2.205272434	0.000064686	-0.000014195		
4S1/2			0.797976065	0.000061681	-0.000004863		
4P1/2			0.662207300	0.000086433	-0.000013043		
4P3/2			0.650405797	0.000039864	-0.000001175		
2P3/2 -- (4)	124.830326	-284.630712	5.472251473	0.011952639		-0.000012255	0.000000229
3S1/2			2.218930473	0.000704260	-0.000040817		
3P1/2			2.261587061	0.000407270	-0.000014714		
3P3/2			2.185180177	0.000977269	-0.000079722		
3D3/2			2.212042376	0.000573218	-0.000059097		
3D5/2			2.170522574	0.000993031	-0.000280635		
4S1/2			0.797184132	0.000081583	-0.000005073		
4P1/2			0.667124299	0.000032861	-0.000001310		
4P3/2			0.647158120	0.000076535	-0.000006652		
3S1/2 -- (2)	32.092562	-97.531129	1.693488242	0.000340789		-0.0000814639	0.000002515
3P1/2			1.504837048	0.000150241	-0.000008615		
3P3/2			1.489385971	0.000196496	-0.000011045		
3D3/2			1.592043162	0.000121239	-0.000007640		
3D5/2			1.586465862	0.000139559	-0.000007779		
4S1/2			0.723137737	0.000024374	-0.000007873		
4P1/2			0.620277780	0.000012980	-0.000002108		
4P3/2			0.605248580	0.000018446	-0.000001788		
3P1/2 -- (2)	30.053765	-93.493896	1.688945963	0.000612903		-0.000013815	0.000000092
3P3/2			1.588562158	0.000109970	-0.000000017		
3D3/2			1.502264592	0.000254876	-0.000028026		
3D5/2			1.614399026	0.000095560	-0.000000958		
4S1/2			0.733324491	0.000025352	-0.000002929		
4P1/2			0.611092535	0.000022660	-0.000004176		
4P3/2			0.607227844	0.000010233	-0.000000383		
3P3/2 -- (4)	28.568833	-91.011169	1.600569150	0.000384300		-0.000002050	0.000000038
3D3/2			1.592139397	0.000094473	-0.000003195		
3D5/2			1.528872798	0.000208233	-0.000015498		
4S1/2			0.731705668	0.000031256	-0.000003154		
4P1/2			0.621101325	0.000008943	-0.000000440		
4P3/2			0.600885992	0.000020027	-0.000002132		
3D3/2 -- (4)	24.013049	-82.106312	1.600794018	0.000483795		-0.000000003	0.000000000
3D5/2			1.612854111	0.000090102	-0.000000000		
4S1/2			0.732687619	0.000012667	-0.000000160		
4P1/2			0.616906635	0.000017220	-0.000000934		
4P3/2			0.605803936	0.000006731	-0.000000129		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
KRYPTON 4P6 Z=36 A=84 R=9.93144E-05 A.U.							
3D5/2 -- (6)	23.669358	-81.461150	1.596458003	0.000427222		-0.000000001	0.000000000
4S1/2			0.732039492	0.000015912	-0.000000158		
4P1/2			0.620573718	0.000007339	-0.000000052		
4P3/2			0.603475179	0.000014481	-0.000000531		
4S1/2 -- (2)	5.103876	-30.782424	0.574528726	0.000010966		-0.000097397	0.000000300
4P1/2			0.458620370	0.000009147	-0.000001186		
4P3/2			0.451905432	0.000006306	-0.000001291		
4P1/2 -- (2)	3.461431	-24.993758	0.469840039	0.000011897		-0.000001152	0.000000008
4P3/2			0.439820441	0.000002146	-0.000000000		
4P3/2 -- (4)	3.244501	-24.268458	0.441690554	0.000007301		-0.000000168	0.000000003
ETOT	-2787.49663	2860.11596	-6735.31318	1086.38430	1.576274229	-0.151746546	-0.108587681
RUBIDIUM 5S1 Z=37 A=85 R=9.97069E-05 A.U.							
1S1/2 -- (2)	702.439539	-1399.676142	23.341459844	0.658817038		-0.053993138	0.000206221
2S1/2			6.835680454	0.029708676	-0.003295278		
2P1/2			7.980331463	0.060255405	-0.009287900		
2P3/2			7.734778660	0.031785027	-0.009182575		
3S1/2			2.552054669	0.004837415	-0.000570513		
3P1/2			2.635440090	0.008763244	-0.001358081		
3P3/2			2.570343567	0.004576113	-0.001357299		
3D3/2			2.399155318	0.000132223	-0.000017453		
3D5/2			2.379710305	0.000054809	-0.000017518		
4S1/2			0.889965782	0.000632325	-0.000075222		
4P1/2			0.774600239	0.000855631	-0.000132698		
4P3/2			0.755018118	0.000441639	-0.000131421		
5S1/2			0.235556008	0.000036720	-0.000004372		
2S1/2 -- (2)	141.302174	-314.112740	5.086822816	0.009401440		-0.005620459	0.000020736
2P1/2			4.928561859	0.002943139	-0.000020694		
2P3/2			4.866793789	0.005187385	-0.000037475		
3S1/2			2.216674222	0.000831021	-0.000199768		
3P1/2			2.297664665	0.001116315	-0.000175239		
3P3/2			2.256558403	0.001192371	-0.000153406		
3D3/2			2.290883678	0.000762646	-0.000105933		
3D5/2			2.275067655	0.000340437	-0.000104851		
4S1/2			0.847690676	0.000108088	-0.000026997		
4P1/2			0.742220519	0.000112683	-0.000018105		
4P3/2			0.725261774	0.000116167	-0.000015816		
5S1/2			0.233109991	0.000006273	-0.000001572		
2P1/2 -- (2)	141.020464	-313.296566	5.990643078	0.021018026		-0.000099216	0.000000742
2P3/2			5.632983934	0.003652422	-0.000000254		
3S1/2			2.310398867	0.000584475	-0.000043206		
3P1/2			2.284119508	0.001213422	-0.000173657		
3P3/2			2.319845344	0.000559960	-0.000015046		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUBIDIUM	5S1	Z=37 A=85 R=9.97069E-05 A.U.					
3D3/2			2.280809447	0.002254759	-0.000534253		
3D5/2			2.318572309	0.000074747	-0.000016371		
4S1/2			0.858969354	0.000075358	-0.000005959		
4P1/2			0.741496653	0.000115689	-0.000017580		
4P3/2			0.731189740	0.000053758	-0.000001598		
5S1/2			0.233759474	0.000004370	-0.000000348		
2P3/2 -- (4)	132.795991	-301.770098	5.646405211	0.013110757		-0.000014520	0.000000294
3S1/2			2.302831080	0.000784344	-0.000045642		
3P1/2			2.354426863	0.000456571	-0.000016625		
3P3/2			2.272939962	0.001093591	-0.000089715		
3D3/2			2.325684984	0.000660893	-0.000068089		
3D5/2			2.280799609	0.001143961	-0.000323388		
4S1/2			0.858007364	0.000099519	-0.000006227		
4P1/2			0.747586797	0.000043940	-0.000001773		
4P3/2			0.727055781	0.000102945	-0.000009023		
5S1/2			0.233703765	0.000005761	-0.000000363		
3S1/2 -- (2)	34.750014	-104.285085	1.758789520	0.000383321		-0.000933051	0.000003427
3P1/2			1.565802389	0.000166911	-0.000009228		
3P3/2			1.549076077	0.000221294	-0.000012086		
3D3/2			1.667293099	0.000136639	-0.000008270		
3D5/2			1.661396978	0.000159858	-0.000008440		
4S1/2			0.774264803	0.000030171	-0.000009855		
4P1/2			0.689550231	0.000018162	-0.000002992		
4P3/2			0.674804483	0.000025539	-0.000002539		
5S1/2			0.228977803	0.000001751	-0.000000587		
3P1/2 -- (2)	32.690058	-100.240260	1.760524358	0.000694710		-0.000016974	0.000000126
3P3/2			1.655160967	0.000124154	-0.000000021		
3D3/2			1.576619197	0.000287527	-0.000030392		
3D5/2			1.693723598	0.000110422	-0.000001047		
4S1/2			0.786027063	0.000031102	-0.000003618		
4P1/2			0.678595632	0.000030684	-0.000005796		
4P3/2			0.677436031	0.000013962	-0.000000539		
5S1/2			0.229598748	0.000001762	-0.000000211		
3P3/2 -- (4)	31.006879	-97.451300	1.667033745	0.000434552		-0.000002484	0.000000050
3D3/2			1.669645991	0.000106727	-0.000003425		
3D5/2			1.603531729	0.000237169	-0.000016653		
4S1/2			0.784134938	0.000038478	-0.000003911		
4P1/2			0.690689040	0.000012122	-0.000000616		
4P3/2			0.669600381	0.000027249	-0.000002982		
5S1/2			0.229493325	0.000002171	-0.000000227		
3D3/2 -- (4)	26.511982	-88.810363	1.691207986	0.000564845		-0.000000003	0.000000000
3D5/2			1.703882971	0.000105472	-0.000000000		
4S1/2			0.786869503	0.000015769	-0.000000218		
4P1/2			0.686886651	0.000023296	-0.000001294		
4P3/2			0.676671524	0.000009226	-0.000000182		
5S1/2			0.229659409	0.000000896	-0.000000015		
3D5/2 -- (6)	26.120799	-88.088499	1.686388868	0.000498609		-0.000000001	0.000000000
4S1/2			0.786142436	0.000019678	-0.000000216		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUBIDIUM	5S1	Z=37 A=85 R=9.97069E-05 A.U.					
4P1/2			0.691124476	0.000009946	-0.000000076		
4P3/2			0.673910466	0.000019696	-0.000000739		
5S1/2			0.229619720	0.000001099	-0.000000015		
4S1/2 -- (2)	6.055293	-34.215613	0.618807911	0.000013935		-0.000122327	0.000000449
4P1/2			0.505604310	0.000011571	-0.000001458		
4P3/2			0.499289338	0.000008341	-0.000001625		
5S1/2			0.217569721	0.000000496	-0.000000179		
4P1/2 -- (2)	4.456544	-28.928077	0.529220952	0.000017028		-0.000001692	0.000000013
4P3/2			0.495889012	0.000003092	-0.000000001		
5S1/2			0.216636723	0.000000819	-0.000000108		
4P3/2 -- (4)	4.202316	-28.163652	0.499028686	0.000010547		-0.000000245	0.000000005
5S1/2			0.216095441	0.000000893	-0.000000113		
5S1/2 -- (1)	0.445235	-8.790292	0.000000000	0.000000000		-0.000007106	0.000000026
ETOT	-2978.31888	3060.66688	-7191.61191	1151.18136	1.733937125	-0.167963165	0.000464852
STRONTIUM	5S2	Z=38 A=88 R=1.00866E-04 A.U.					
1S1/2 -- (2)	743.796302	-1480.017202	24.019356554	0.715324648		-0.060227320	0.000266967
2S1/2			7.049599856	0.032447978	-0.003606113		
2P1/2			8.238255756	0.065931122	-0.010145460		
2P3/2			7.970635154	0.034705780	-0.010027228		
3S1/2			2.648588406	0.005361495	-0.000633778		
3P1/2			2.744302616	0.009769874	-0.001511387		
3P3/2			2.673519381	0.005096933	-0.001512276		
3D3/2			2.517801097	0.000153065	-0.000020180		
3D5/2			2.496643049	0.000063409	-0.000020275		
4S1/2			0.955242015	0.000760891	-0.000090754		
4P1/2			0.853869072	0.001092380	-0.000169148		
4P3/2			0.832877655	0.000565734	-0.000168435		
5S1/2			0.287960997	0.000063726	-0.000007609		
2S1/2 -- (2)	150.510680	-333.131470	5.245705487	0.010312041		-0.006320097	0.000027099
2P1/2			5.085709924	0.003223279	-0.000021635		
2P3/2			5.018387615	0.005677349	-0.000040866		
3S1/2			2.297516499	0.000925412	-0.000222806		
3P1/2			2.388461246	0.001259158	-0.000197870		
3P3/2			2.344108996	0.001334058	-0.000172172		
3D3/2			2.400927667	0.000871393	-0.000121072		
3D5/2			2.383853498	0.000389283	-0.000119847		
4S1/2			0.907242593	0.000130655	-0.000032713		
4P1/2			0.814824758	0.000145691	-0.000023449		
4P3/2			0.796977030	0.000149503	-0.000020464		
5S1/2			0.283958251	0.000010935	-0.000002749		
2P1/2 -- (2)	150.255432	-332.342591	6.185183216	0.023075116		-0.000118743	0.000000987
2P3/2			5.811492314	0.003995755	-0.000000312		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
STRONTIUM 5S2 Z=38 A=88 R=1.00866E-04 A.U.							
3S1/2			2.395900262	0.000649631	-0.000048051		
3P1/2			2.374789219	0.001357659	-0.000195141		
3P3/2			2.411009666	0.000625402	-0.000016864		
3D3/2			2.390554496	0.002579796	-0.000611485		
3D5/2			2.430928665	0.000085743	-0.000018747		
4S1/2			0.920068137	0.000090914	-0.000007211		
4P1/2			0.814044473	0.000148106	-0.000022654		
4P3/2			0.804175178	0.000069039	-0.000002068		
5S1/2			0.285021809	0.000007601	-0.000000608		
2P3/2 -- (4)	141.019142	-319.424140	5.820822472	0.014342171		-0.000017120	0.000000375
3S1/2			2.387530964	0.000871013	-0.000050897		
3P1/2			2.448074282	0.000510079	-0.000018715		
3P3/2			2.361286766	0.001219543	-0.000100591		
3D3/2			2.438445855	0.000756635	-0.000077897		
3D5/2			2.390074323	0.001308572	-0.000370029		
4S1/2			0.918913797	0.000119868	-0.000007548		
4P1/2			0.821271196	0.000056193	-0.000002294		
4P3/2			0.799151853	0.000131875	-0.000011651		
5S1/2			0.284925450	0.000010002	-0.000000635		
3S1/2 -- (2)	37.551240	-111.316123	1.824734534	0.000429832		-0.001065180	0.000004547
3P1/2			1.627353743	0.000184927	-0.000009855		
3P3/2			1.609270583	0.000248361	-0.000013201		
3D3/2			1.742238963	0.000153283	-0.000008914		
3D5/2			1.735985349	0.000182005	-0.000009120		
4S1/2			0.825182741	0.000036861	-0.000012165		
4P1/2			0.752335731	0.000024256	-0.000004044		
4P3/2			0.736952830	0.000033623	-0.000003420		
5S1/2			0.277327804	0.000003084	-0.000001048		
3P1/2 -- (2)	35.469838	-107.263230	1.832754824	0.000784445		-0.000020742	0.000000172
3P3/2			1.722300430	0.000139608	-0.000000027		
3D3/2			1.650826623	0.000322890	-0.000032836		
3D5/2			1.772767565	0.000126717	-0.000001140		
4S1/2			0.838596460	0.000037670	-0.000004411		
4P1/2			0.739781911	0.000039727	-0.000007671		
4P3/2			0.740270376	0.000018130	-0.000000719		
5S1/2			0.278335884	0.000003068	-0.000000372		
3P3/2 -- (4)	33.567722	-104.138228	1.733964463	0.000489474		-0.000002993	0.000000065
3D3/2			1.746833169	0.000119970	-0.000003655		
3D5/2			1.677888673	0.000268648	-0.000017818		
4S1/2			0.836406067	0.000046765	-0.000004788		
4P1/2			0.753815434	0.000015706	-0.000000820		
4P3/2			0.731008060	0.000035302	-0.000003960		
5S1/2			0.278160583	0.000003790	-0.000000400		
3D3/2 -- (4)	29.121547	-95.723351	1.780808498	0.000653849		-0.000000005	0.000000000
3D5/2			1.794046060	0.000122370	-0.000000000		
4S1/2			0.840965344	0.000019336	-0.000000287		
4P1/2			0.750650919	0.000030093	-0.000001702		
4P3/2			0.740346494	0.000012019	-0.000000244		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
STRONTIUM 5S2 Z=38 A=88 R=1.00866E-04 A.U.							
3D5/2 -- (6)	28.677631	-94.916514	0.278541982	0.000001580	-0.000000029	-0.000000001	0.000000000
4S1/2 -- (2)	7.099639	-37.811234	0.662814434	0.000017430	-0.000015164	0.000000647	
4P1/2 -- (2)	5.500795	-32.782165	0.581867375	0.000022918	-0.000002371	0.000000020	
4P3/2 -- (4)	5.196503	-31.933523	0.549068631	0.000014235	-0.000000340	0.000000007	
5S1/2 -- (2)	0.746306	-11.069131	0.204908334	0.000000434	-0.0000012705	0.000000054	
ETOT	-3176.45792	3269.54590	-7665.84234	1218.25673	-0.185360946	-0.135919441	0.000602781
YTTRIUM 4D1 Z=39 A=89 R=1.01247E-04 A.U.							
1S1/2 -- (2)	786.553484	-1562.886239	24.700609108	0.775063851	-0.067009260	0.000338898	
2S1/2 -- (2)	160.076919	-352.798777	5.405466954	0.011284301	-0.007087605	0.000034706	
2P1/2 -- (2)			5.243823966	0.003522144	-0.000022588		
2P3/2 -- (2)			5.170594889	0.006198203	-0.000044564		
3S1/2 -- (2)			2.378997416	0.001027527	-0.000247753		
3P1/2 -- (2)			2.479904549	0.001414962	-0.000222564		
3P3/2 -- (2)			2.432122524	0.001487099	-0.000192459		
3D3/2 -- (2)			2.510042711	0.000989220	-0.000137475		
3D5/2 -- (2)			2.491603525	0.000442214	-0.000136094		
4S1/2 -- (2)			0.962485508	0.000154435	-0.000038754		
4P1/2 -- (2)			0.877560172	0.000179615	-0.000028953		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTRIUM	401	Z=39 A=89 R=1.01247E-04 A.U.					
4P3/2			0.858137403	0.000182958	-0.000025164		
4D3/2			0.501951892	0.000037357	-0.000005311		
5S1/2			0.310736346	0.000013902	-0.000003505		
2P1/2 -- (2)	159.848724	-352.037910	6.380986021	0.025272783		-0.000141508	0.000001296
2P3/2			5.990770462	0.004360306	-0.000000381		
3S1/2			2.482136673	0.000720021	-0.000053285		
3P1/2			2.466125543	0.001513977	-0.000218492		
3P3/2			2.502704563	0.000696077	-0.000018832		
3D3/2			2.499413122	0.002932438	-0.000695300		
3D5/2			2.542272288	0.000097682	-0.000021325		
4S1/2			0.976771942	0.000107265	-0.000008530		
4P1/2			0.876761456	0.000180908	-0.000027840		
4P3/2			0.866464113	0.000084333	-0.000002545		
4D3/2			0.501607368	0.000112828	-0.000027096		
5S1/2			0.312009474	0.000009645	-0.000000774		
2P3/2 -- (4)	149.505674	-337.599718	5.995596584	0.015649969		-0.000020095	0.000000475
3S1/2			2.472903599	0.000964475	-0.000056600		
3P1/2			2.542372572	0.000567915	-0.000020992		
3P3/2			2.450067800	0.001355359	-0.000112371		
3D3/2			2.550266840	0.000860561	-0.000088532		
3D5/2			2.498290190	0.001487025	-0.000420607		
4S1/2			0.975416769	0.000141187	-0.000008946		
4P1/2			0.884957326	0.000068557	-0.000002829		
4P3/2			0.860644017	0.000140700	-0.000014305		
4D3/2			0.503523968	0.000033401	-0.000003453		
5S1/2			0.311887823	0.000012667	-0.000000810		
3S1/2 -- (2)	40.494147	-118.620684	1.891224342	0.000480474		-0.001212090	0.000005910
3P1/2			1.689393332	0.000204339	-0.000010498		
3P3/2			1.669870139	0.000277766	-0.000014397		
3D3/2			1.816869773	0.000171228	-0.000009577		
3D5/2			1.810217576	0.000206049	-0.000009822		
4S1/2			0.872569084	0.000044019	-0.000014662		
4P1/2			0.806635472	0.000030821	-0.000005189		
4P3/2			0.790027803	0.000042021	-0.000004359		
4D3/2			0.480099225	0.000004773	-0.000000305		
5S1/2			0.302940453	0.000003961	-0.000001360		
3P1/2 -- (2)	38.390413	-114.558085	1.905519433	0.000882401		-0.000025213	0.000000230
3P3/2			1.789865905	0.000156360	-0.000000034		
3D3/2			1.724833058	0.000361101	-0.000035377		
3D5/2			1.851495024	0.000144480	-0.000001237		
4S1/2			0.887545862	0.000044620	-0.000005257		
4P1/2			0.792828569	0.000049060	-0.000009657		
4P3/2			0.793996462	0.000022376	-0.000000909		
4D3/2			0.479310160	0.000010435	-0.000000961		
5S1/2			0.304143264	0.000003903	-0.000000477		
3P3/2 -- (4)	36.247452	-111.065502	1.801243957	0.000549203		-0.000003586	0.000000084
3D3/2			1.823664853	0.000134240	-0.000003887		
3D5/2			1.751895818	0.000302749	-0.000019002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTRIUM 401 Z=39 A=89 R=1.01247E-04 A.U.							
4S1/2			0.885058307	0.000055580	-0.000005729		
4P1/2			0.808448175	0.000019406	-0.000001039		
4P3/2			0.783524340	0.000043497	-0.000004986		
4D3/2			0.479952422	0.000003743	-0.000000198		
5S1/2			0.303929438	0.000004834	-0.000000515		
3D3/2 -- (4)	31.836859	-102.839421	1.869551676	0.000750956		-0.000000006	0.000000000
3D5/2			1.883295696	0.000140819	-0.000000000		
4S1/2			0.891425949	0.000023143	-0.000000365		
4P1/2			0.806111062	0.000037062	-0.0000002127		
4P3/2			0.795004143	0.000014869	-0.000000308		
4D3/2			0.476719785	0.000016267	-0.000000871		
5S1/2			0.304490296	0.000002032	-0.000000040		
3D5/2 -- (6)	31.334421	-101.938526	1.863495717	0.000662257		-0.000000001	0.000000000
4S1/2			0.890521560	0.000028600	-0.000000362		
4P1/2			0.811257089	0.000015903	-0.000000138		
4P3/2			0.791511418	0.000031358	-0.000001215		
4D3/2			0.481310157	0.000004281	-0.000000040		
5S1/2			0.304413568	0.000002469	-0.000000040		
4S1/2 -- (2)	8.144435	-41.357895	0.703173586	0.000021148		-0.000183760	0.000000895
4P1/2			0.586920662	0.000016702	-0.000001994		
4P3/2			0.579948902	0.000012949	-0.000002310		
4D3/2			0.424577090	0.000005816	-0.000000753		
5S1/2			0.283900144	0.000001211	-0.000000469		
4P1/2 -- (2)	6.495172	-36.380124	0.626515257	0.000028991		-0.000003163	0.000000029
4P3/2			0.586947968	0.000005241	-0.000000002		
4D3/2			0.392441742	0.000013409	-0.000002970		
5S1/2			0.283635403	0.000001954	-0.000000268		
4P3/2 -- (4)	6.129718	-35.414077	0.590980967	0.000017989		-0.000000448	0.000000011
4D3/2			0.412909419	0.000004157	-0.000000360		
5S1/2			0.282840190	0.000002139	-0.000000285		
4D3/2 -- (1)	2.105925	-19.773809	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.248971549	0.000000414	-0.000000003		
5S1/2 -- (2)	0.920317	-12.462028	0.224159232	0.000000576		-0.000016562	0.000000081
ETOT	-3381.99417	3486.83848	-8161.28332	1290.72329	2.082022206	-0.203955413	-0.151454870 0.000766369
ZIRCONIUM 402 Z=40 A=90 R=1.01625E-04 A.U.							
1S1/2 -- (2)	830.734123	-1648.313606	25.385288256	0.838132920		-0.074373720	0.000423463
2S1/2			7.481441707	0.038447941	-0.004289261		
2P1/2			8.759882419	0.078382003	-0.012018311		
2P3/2			8.443939771	0.041080086	-0.011870757		
3S1/2			2.844279955	0.006530901	-0.000775488		
3P1/2			2.964793211	0.012022399	-0.001852862		
3P3/2			2.881524977	0.006260200	-0.001858563		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM 4D2 Z=40 A=90 R=1.01625E-04 A.U.							
3D3/2			2.752310640	0.000200765	-0.000026402		
3D5/2			2.727300030	0.000083055	-0.000026574		
4S1/2			1.073629807	0.001037224	-0.000124344		
4P1/2			0.986184878	0.001579642	-0.000243642		
4P3/2			0.960536300	0.000817544	-0.000243636		
4D3/2			0.592249640	0.000011375	-0.000001499		
5S1/2			0.335126387	0.000094421	-0.000011335		
2S1/2 -- (2)	170.005914	-373.121713	5.566088527	0.012320573		-0.007927866	0.000043729
2P1/2			5.402880176	0.003840455	-0.000023555		
2P3/2			5.323378243	0.006750796	-0.000048603		
3S1/2			2.460984435	0.001137617	-0.000274674		
3P1/2			2.571816030	0.001584165	-0.000249388		
3P3/2			2.520397370	0.001651644	-0.000214278		
3D3/2			2.618139892	0.001116240	-0.000155157		
3D5/2			2.598232679	0.000499277	-0.000153606		
4S1/2			1.015083280	0.000179678	-0.000045184		
4P1/2			0.935579408	0.000215615	-0.000034804		
4P3/2			0.914287857	0.000217834	-0.000030091		
4D3/2			0.585297797	0.000054445	-0.000007758		
5S1/2			0.329823446	0.000016342	-0.000004130		
2P1/2 -- (2)	169.804752	-372.388842	6.578013172	0.027616307		-0.000167953	0.000001684
2P3/2			6.170765065	0.004746584	-0.000000462		
3S1/2			2.568962697	0.000795813	-0.000058920		
3P1/2			2.557949048	0.001682735	-0.000243770		
3P3/2			2.594713976	0.000772078	-0.000020950		
3D3/2			2.607295192	0.003313042	-0.000785785		
3D5/2			2.652502045	0.000110569	-0.000024107		
4S1/2			1.030773906	0.000124583	-0.000009932		
4P1/2			0.934787339	0.000215293	-0.000033320		
4P3/2			0.923675713	0.000100250	-0.000003045		
4D3/2			0.584853364	0.000164967	-0.000039671		
5S1/2			0.331235355	0.000011318	-0.000000911		
2P3/2 -- (4)	158.253783	-356.294959	6.170660544	0.017036062		-0.000023487	0.000000595
3S1/2			2.558801661	0.001064918	-0.000062766		
3P1/2			2.637128039	0.000630179	-0.000023460		
3P3/2			2.539072765	0.001501192	-0.000125076		
3D3/2			2.661043902	0.000972781	-0.000100002		
3D5/2			2.605354766	0.001679480	-0.000475164		
4S1/2			1.029207195	0.000163700	-0.000010436		
4P1/2			0.943858056	0.000081482	-0.000003398		
4P3/2			0.917098042	0.000190587	-0.000017086		
4D3/2			0.587470242	0.000048885	-0.000005052		
5S1/2			0.331093275	0.000014836	-0.000000956		
3S1/2 -- (2)	43.576333	-126.194392	1.958120641	0.000535375		-0.001374869	0.000007552
3P1/2			1.751781988	0.000225185	-0.000011155		
3P3/2			1.730725715	0.000309558	-0.000015680		
3D3/2			1.891107572	0.000190508	-0.000010260		
3D5/2			1.884017282	0.000232021	-0.000010550		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM 402 Z=40 A=90 R=1.01625E-04 A.U.							
4S1/2			0.917845257	0.000051715	-0.000017366		
4P1/2			0.856948905	0.000038049	-0.000006456		
4P3/2			0.838872794	0.000051007	-0.000005381		
4D3/2			0.555807002	0.000007198	-0.000000481		
5S1/2			0.321318237	0.000004700	-0.000001628		
3P1/2 -- (2)	41.448330	-122.118498	1.978637041	0.000988806		-0.000030491	0.000000305
3P3/2			1.857677167	0.000174418	-0.000000042		
3D3/2			1.798526314	0.000402237	-0.000038025		
3D5/2			1.929794037	0.000163731	-0.000001339		
4S1/2			0.934326774	0.000052018	-0.000006161		
4P1/2			0.842073142	0.000059001	-0.000011809		
4P3/2			0.843482068	0.000026855	-0.000001113		
4D3/2			0.554921190	0.000016046	-0.000001582		
5S1/2			0.322650462	0.000004593	-0.000000565		
3P3/2 -- (4)	39.040661	-118.223915	1.868678215	0.000613813		-0.000004274	0.000000108
3D3/2			1.900016839	0.000149553	-0.000004120		
3D5/2			1.825428607	0.000339509	-0.000020206		
4S1/2			0.931536277	0.000065013	-0.000006743		
4P1/2			0.859089104	0.000023344	-0.000001277		
4P3/2			0.831901827	0.000052143	-0.000006090		
4D3/2			0.555658682	0.000005647	-0.000000322		
5S1/2			0.322408236	0.000005706	-0.000000612		
3D3/2 -- (4)	34.652332	-110.150897	1.957313677	0.000856231		-0.000000008	0.000000000
3D5/2			1.971507600	0.000160826	-0.000000000		
4S1/2			0.939668658	0.000027220	-0.000000450		
4P1/2			0.857654841	0.000044431	-0.000002579		
4P3/2			0.845442150	0.000017877	-0.000000378		
4D3/2			0.551808380	0.000023827	-0.000001351		
5S1/2			0.323123605	0.000002413	-0.000000049		
3D5/2 -- (6)	34.085396	-109.146606	1.950499238	0.000754657		-0.000000002	0.000000000
4S1/2			0.938672159	0.000033518	-0.000000448		
4P1/2			0.863141411	0.000019114	-0.000000174		
4P3/2			0.841649315	0.000037525	-0.000001468		
4D3/2			0.557828260	0.000006295	-0.000000064		
5S1/2			0.323037972	0.000002923	-0.000000049		
4S1/2 -- (2)	9.203770	-44.915372	0.741459518	0.000025143		-0.000219114	0.000001203
4P1/2			0.622292077	0.000019321	-0.000002253		
4P3/2			0.614713468	0.000015411	-0.000002657		
4D3/2			0.483160398	0.000008096	-0.000001037		
5S1/2			0.301238765	0.000001469	-0.000000575		
4P1/2 -- (2)	7.486759	-39.913840	0.667571483	0.000035489		-0.000004104	0.000000041
4P3/2			0.625162731	0.000006377	-0.000000002		
4D3/2			0.444763438	0.000018349	-0.000004013		
5S1/2			0.301294606	0.000002342	-0.000000323		
4P3/2 -- (4)	7.051511	-38.811041	0.629257797	0.000021970		-0.000000572	0.000000014
4D3/2			0.469736298	0.000005727	-0.000000482		
5S1/2			0.300441712	0.000002579	-0.000000346		
4D3/2 -- (2)	2.871532	-23.693303	0.383718106	0.000007796		-0.000000000	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ZIRCONIUM 4D2 Z=40 A=90 R=1.01625E-04 A.U.							
5S1/2 -- (2)	1.050545	-13.584370	0.272729935 0.237739404	0.000000549 0.000000691	-0.000000001	-0.000019956	0.000000110
ETOT	-3595.16507	3712.86964	-8677.29076	1367.37407	2.273176666	-0.223813085	-0.168349526
NIOBIUM 4D4 5S1 Z=41 A=93 R=1.02742E-04 A.U.							
1S1/2 -- (2)	876.366998	-1736.335659	26.073560192	0.904638567		-0.082357271	0.000522251
2S1/2			7.699418511	0.041721045	-0.004663186		
2P1/2			9.023699506	0.085184068	-0.013036794		
2P3/2			8.681388108	0.044544176	-0.012872686		
3S1/2			2.943143954	0.007178254	-0.000854230		
3P1/2			3.076053477	0.013271691	-0.002041340		
3P3/2			2.985942744	0.006904043	-0.002050291		
3D3/2			2.868071259	0.000227694	-0.000029903		
3D5/2			2.840922147	0.000094126	-0.000030126		
4S1/2			1.126447983	0.001180486	-0.000141868		
4P1/2			1.041167011	0.001820857	-0.000280291		
4P3/2			1.012327609	0.000939974	-0.000280241		
4D3/2			0.622784454	0.000013492	-0.000001776		
5S1/2			0.333605009	0.000093089	-0.000011203		
2S1/2 -- (2)	180.307369	-394.112558	5.727613164	0.013423724		-0.008846240	0.000054361
2P1/2			5.562939127	0.004179089	-0.000024532		
2P3/2			5.476780644	0.007336310	-0.000053011		
3S1/2			2.543401112	0.001255948	-0.000303625		
3P1/2			2.664109741	0.001767275	-0.000278422		
3P3/2			2.608840755	0.001827903	-0.000237652		
3D3/2			2.725269623	0.001252604	-0.000174139		
3D5/2			2.703788710	0.000560528	-0.000172401		
4S1/2			1.063267953	0.000205372	-0.000051743		
4P1/2			0.985798353	0.000251274	-0.000040609		
4P3/2			0.962005962	0.000251361	-0.000034855		
4D3/2			0.615087194	0.000063285	-0.000009034		
5S1/2			0.328648213	0.000016181	-0.000004097		
2P1/2 -- (2)	180.134747	-393.409440	6.776360759	0.030112697		-0.000198583	0.000002166
2P3/2			6.351544868	0.005155359	-0.000000559		
3S1/2			2.656293237	0.000877179	-0.000064967		
3P1/2			2.650175626	0.001864341	-0.000271031		
3P3/2			2.686936730	0.000853521	-0.000023222		
3D3/2			2.714252188	0.003722062	-0.000883047		
3D5/2			2.761654377	0.000124413	-0.000027096		
4S1/2			1.080226153	0.000142171	-0.000011360		
4P1/2			0.985040461	0.000248883	-0.000038717		
4P3/2			0.972281578	0.000115525	-0.000003529		
4D3/2			0.614629215	0.000192318	-0.000046303		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NIOBIUM 404 5S1 Z=41 A=93 R=1.02742E-04 A.U.							
2P3/2 -- 5S1/2	167.267491	-375.514614	0.329969812	0.000011188	-0.000000903	-0.000027340	0.000000741
(4)			6.346065718	0.018503297			
3S1/2			2.645137655	0.001172543	-0.000069413		
3P1/2			2.732244089	0.000696985	-0.000026128		
3P3/2			2.628203621	0.001657249	-0.000138724		
3D3/2			2.770816889	0.001093428	-0.000112319		
3D5/2			2.711311096	0.001886131	-0.000533756		
4S1/2			1.078445831	0.000186481	-0.000011960		
4P1/2			0.994807461	0.000094063	-0.000003961		
4P3/2			0.965058522	0.000219142	-0.000019774		
4D3/2	46.796044	-134.034624	0.617482561	0.000057035	-0.000005892	-0.001554655	0.000009514
5S1/2			0.329829961	0.000014639	-0.000000949		
3S1/2 -- (2)			2.025354284	0.000594677			
3P1/2			1.814455712	0.000247513	-0.000011827		
3P3/2			1.791770736	0.000343793	-0.000017057		
3D3/2			1.964976648	0.000211178	-0.000010967		
3D5/2			1.957408762	0.000259969	-0.000011307		
4S1/2			0.959686820	0.000059657	-0.000020175		
4P1/2			0.900907074	0.000045493	-0.000007767		
4P3/2			0.880838223	0.000059897	-0.000006410		
4D3/2	44.641560	-129.941390	0.583207582	0.000008651	-0.000000599	-0.000036693	0.000000399
5S1/2			0.320800051	0.000004696	-0.000001636		
3P1/2 -- (2)			2.052035050	0.001103934			
3P3/2			1.925661597	0.000193801	-0.000000053		
3D3/2			1.871898108	0.000446428	-0.000040801		
3D5/2			2.007678580	0.000184501	-0.000001447		
4S1/2			0.977534385	0.000059574	-0.000007089		
4P1/2			0.885250438	0.000068892	-0.000013989		
4P3/2			0.886020316	0.000031219	-0.000001316		
4D3/2			0.582413953	0.000019576	-0.000002037		
5S1/2	41.943834	-125.608289	0.322050946	0.000004558	-0.000000564	-0.000005068	0.000000137
3P3/2 -- (4)			1.936191431	0.000683415			
3D3/2			1.975898438	0.000165941	-0.000004356		
3D5/2			1.898488331	0.000378997	-0.000021439		
4S1/2			0.974449016	0.000074705	-0.000007792		
4P1/2			0.903341871	0.000027258	-0.000001519		
4P3/2			0.873543343	0.000060579	-0.000007191		
4D3/2			0.583097501	0.000006789	-0.000000410		
5S1/2			0.321818713	0.000005680	-0.000000613		
3D3/2 -- (4)			2.044139436	0.000969827		-0.000000010	0.000000000
3D5/2	37.564995	-117.655639	2.058726784	0.000182416	-0.000000000		
4S1/2			0.984238226	0.000031411	-0.000000540		
4P1/2			0.902840589	0.000051712	-0.0000003030		
4P3/2			0.888886223	0.000020813	-0.000000446		
4D3/2			0.579387672	0.000027875	-0.000001653		
5S1/2			0.322560432	0.000002413	-0.000000051		
3D5/2 -- (6)			2.036472935	0.000854229		-0.000000002	0.000000000
4S1/2			0.983151171	0.000038566	-0.000000538		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NIOBIUM 404 5S1 Z=41 A=93 R=1.02742E-04 A.U.							
			0.908572842	0.000022298	-0.000000211		
			0.884856748	0.000043519	-0.000001716		
			0.585760023	0.000007386	-0.000000079		
			0.322479226	0.000002917	-0.000000051		
4S1/2 -- (2)	10.224409	-48.379261	0.776219921	0.000029184		-0.000256601	0.000001569
			0.653369005	0.000021854	-0.000002498		
			0.644931501	0.000017819	-0.000002994		
			0.505431109	0.000009277	-0.000001175		
			0.302547682	0.000001481	-0.000000576		
4P1/2 -- (2)	8.397139	-43.216068	0.702596299	0.000041801		-0.000005162	0.000000056
			0.657516299	0.000007447	-0.000000003		
			0.465759269	0.000020972	-0.000004542		
			0.302770756	0.000002338	-0.000000321		
4P3/2 -- (4)	7.878936	-41.942116	0.661329730	0.000025753		-0.000000708	0.000000019
			0.491725003	0.000006548	-0.000000541		
			0.301941918	0.000002595	-0.000000346		
4D3/2 -- (4)	3.210472	-25.538004	0.399431577	0.000009077		-0.000000001	0.000000000
			0.274699991	0.000000559	-0.000000001		
5S1/2 -- (1)	1.013186	-13.850853	0.000000000	0.000000000		-0.000020245	0.000000124
ETOT	-3816.08226	3947.77568	-9216.97179	1451.06812	2.476158738	-0.244957564	-0.186663179
MOLYBDENUM 405 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
1S1/2 -- (2)	923.471587	-1826.979739	26.765400543	0.974672505		-0.090997748	0.000636986
			7.918742268	0.045183649	-0.005059604		
			9.289435968	0.092383698	-0.014111312		
			8.919225603	0.048197274	-0.013929302		
			3.042715840	0.007869905	-0.000938564		
			3.188064730	0.014608016	-0.002242273		
			3.090675828	0.007591692	-0.002255111		
			2.983307199	0.000256844	-0.000033683		
			2.953872790	0.000106097	-0.000033966		
			1.181135652	0.001339990	-0.000161427		
			1.100117315	0.002099212	-0.000322478		
			1.068254174	0.001082111	-0.000322750		
			0.689712768	0.000017674	-0.000002323		
			0.678727246	0.000007166	-0.000002304		
			0.345973332	0.000102157	-0.000012324		
2S1/2 -- (2)	190.984876	-415.776981	5.890009016	0.014596023		-0.009848101	0.000066813
			5.723940227	0.004538725	-0.000025529		
			5.630731215	0.007955374	-0.000057835		
			2.626284856	0.001382985	-0.000334736		
			2.756854584	0.001965116	-0.000309795		
			2.697505162	0.002016405	-0.000262640		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
3D3/2			2.831851162	0.001399025	-0.000194519		
3D5/2			2.808689194	0.000626284	-0.000192578		
4S1/2			1.113036085	0.000234104	-0.000059089		
4P1/2			1.039435009	0.000292758	-0.000047364		
4P3/2			1.013353151	0.000290330	-0.000040398		
4D3/2			0.680282570	0.000081293	-0.000011626		
4D5/2			0.669841863	0.000036462	-0.000011346		
5S1/2			0.340809035	0.000017831	-0.000004524		
2P1/2 -- (2)	190.838652	-415.101236	6.975914704	0.032766271		-0.000233933	0.000002761
2P3/2			6.532988771	0.005586923	-0.000000672		
3S1/2			2.744169483	0.000964437	-0.000071452		
3P1/2			2.742868970	0.002059538	-0.000300404		
3P3/2			2.779427692	0.000940676	-0.000025656		
3D3/2			2.820694377	0.004161671	-0.000987606		
3D5/2			2.870160924	0.000139287	-0.000030308		
4S1/2			1.131341545	0.000161817	-0.000012957		
4P1/2			1.038717554	0.000287771	-0.000044985		
4P3/2			1.024628558	0.000133284	-0.000004094		
4D3/2			0.679761375	0.000247761	-0.000059721		
4D5/2			0.673491917	0.000008912	-0.000001869		
5S1/2			0.342187621	0.000012310	-0.000000996		
2P3/2 -- (4)	176.540712	-395.252109	6.521682502	0.020052845		-0.000031701	0.000000916
3S1/2			2.731949307	0.001287718	-0.000076576		
3P1/2			2.827788747	0.000768576	-0.000029007		
3P3/2			2.717508159	0.001824007	-0.000153370		
3D3/2			2.880013798	0.001223151	-0.000125546		
3D5/2			2.816572795	0.002108049	-0.000596690		
4S1/2			1.129323182	0.000211865	-0.000013670		
4P1/2			1.049249673	0.000108597	-0.000004616		
4P3/2			1.016671717	0.000252284	-0.000022908		
4D3/2			0.683203677	0.000073530	-0.000007593		
4D5/2			0.670415832	0.000122777	-0.000035318		
5S1/2			0.342034359	0.000016075	-0.000001049		
3S1/2 -- (2)	50.159029	-142.148517	2.092944374	0.000658648		-0.001752921	0.000011843
3P1/2			1.877444485	0.000271401	-0.000012514		
3P3/2			1.853028122	0.000380601	-0.000018536		
3D3/2			2.038689102	0.000233321	-0.000011698		
3D5/2			2.030605168	0.000290032	-0.000012094		
4S1/2			1.002759463	0.000068597	-0.000023346		
4P1/2			0.947577328	0.000054298	-0.000009319		
4P3/2			0.925702468	0.000070321	-0.000007624		
4D3/2			0.642097211	0.000011507	-0.000000826		
4D5/2			0.633000912	0.000015620	-0.000000782		
5S1/2			0.332737665	0.000005219	-0.000001830		
3P1/2 -- (2)	47.976143	-138.034610	2.125753425	0.001228331		-0.000043956	0.000000517
3P3/2			1.993851598	0.000214570	-0.000000065		
3D3/2			1.945155151	0.000493844	-0.000043698		
3D5/2			2.085367792	0.000206897	-0.000001560		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
4S1/2			1.022049626	0.000068023	-0.000008129		
4P1/2			0.931039701	0.000080415	-0.000016541		
4P3/2			0.931522352	0.000036310	-0.000001554		
4D3/2			0.641327077	0.000026375	-0.000002881		
4D5/2			0.634373901	0.000011128	-0.000000251		
5S1/2			0.334042789	0.000005031	-0.000000626		
3P3/2 -- (4)	44.960616	-133.223270	2.003808637	0.000758275		-0.000005981	0.000000172
3D3/2			2.051514742	0.000183461	-0.000004594		
3D5/2			1.971275207	0.000421377	-0.000022692		
4S1/2			1.018638501	0.000085581	-0.000008975		
4P1/2			0.950325419	0.000031815	-0.000001804		
4P3/2			0.918022338	0.000070433	-0.000008485		
4D3/2			0.642017931	0.000009028	-0.000000574		
4D5/2			0.631917763	0.000023680	-0.000001927		
5S1/2			0.333794556	0.000006286	-0.000000683		
3D3/2 -- (4)	40.583732	-125.370196	2.130407001	0.001092391		-0.000000013	0.000000000
3D5/2			2.145335181	0.000205709	-0.000000000		
4S1/2			1.030105443	0.000036106	-0.000000643		
4P1/2			0.950770102	0.000060136	-0.000003552		
4P3/2			0.935314109	0.000024232	-0.000000527		
4D3/2			0.638070374	0.000036010	-0.000002225		
4D5/2			0.636806515	0.000011268	-0.000000102		
5S1/2			0.334630719	0.000002681	-0.000000058		
3D5/2 -- (6)	39.868159	-124.128796	2.121795198	0.000961516		-0.000000003	0.000000000
4S1/2			1.028916331	0.000044219	-0.000000641		
4P1/2			0.956788758	0.000025993	-0.000000255		
4P3/2			0.931004381	0.000050486	-0.000002003		
4D3/2			0.645542297	0.000009569	-0.000000107		
4D5/2			0.631232710	0.000033889	-0.000001461		
5S1/2			0.334544665	0.000003233	-0.000000058		
4S1/2 -- (2)	11.338295	-52.048353	0.812378716	0.000033824		-0.000299604	0.000002023
4P1/2			0.686319888	0.000024713	-0.000002766		
4P3/2			0.677116583	0.000020630	-0.000003375		
4D3/2			0.550693698	0.000011552	-0.000001447		
4D5/2			0.544541944	0.000006766	-0.000001427		
5S1/2			0.314356809	0.000001669	-0.000000652		
4P1/2 -- (2)	9.429337	-46.803697	0.740440297	0.000049377		-0.000006483	0.000000076
4P3/2			0.692571366	0.000008733	-0.000000004		
4D3/2			0.506723752	0.000025903	-0.000005542		
4D5/2			0.538240260	0.000003136	-0.000000181		
5S1/2			0.314792760	0.000002604	-0.000000358		
4P3/2 -- (4)	8.822683	-45.357057	0.696237487	0.000030317		-0.000000876	0.000000025
4D3/2			0.535863289	0.000008113	-0.000000654		
4D5/2			0.511518140	0.000014257	-0.000003086		
5S1/2			0.313928283	0.000002911	-0.000000388		
4D3/2 -- (4)	3.932928	-28.972851	0.443522237	0.000012337		-0.000000001	0.000000000
4D5/2			0.444567455	0.000002296	-0.000000000		
5S1/2			0.290169311	0.000000666	-0.000000000		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MOLYBDENUM 4D5 5S1 Z=42 A=98 R=1.04551E-04 A.U.							
4D5/2 -- (1)	3.810110	-28.511022	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.288931134	0.000001007	-0.000000000		
5S1/2 -- (1)	1.085533	-14.716911	0.000000000	0.000000000		-0.000022854	0.000000154
ETDT -4044.90010	4191.86312	-9774.48890	1535.50664	2.691646154	-0.267505305	-0.206542657	0.001446651
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.							
1S1/2 -- (2)	972.083788	-1920.291142	27.461026231	1.048348882		-0.100339472	0.000769550
2S1/2			8.139497523	0.048843024	-0.005479462		
2P1/2			9.557245267	0.099996952	-0.015243784		
2P3/2			9.157537535	0.052045687	-0.015042450		
3S1/2			3.142918272	0.008607016	-0.001328661		
3P1/2			3.300743698	0.016033440	-0.002455847		
3P3/2			3.195631721	0.008324064	-0.002473293		
3D3/2			3.098001762	0.000288257	-0.000037747		
3D5/2			3.066134973	0.000118980	-0.000038101		
4S1/2			1.234922826	0.001509774	-0.000182313		
4P1/2			1.157764183	0.002395940	-0.000367280		
4P3/2			1.122648860	0.001233072	-0.000367919		
4D3/2			0.751917957	0.000022288	-0.000002926		
4D5/2			0.739759499	0.000009031	-0.000002905		
5S1/2			0.357087685	0.000110758	-0.000013395		
2S1/2 -- (2)	202.049557	-438.129066	6.053329119	0.015840551		-0.010939911	0.000081317
2P1/2			5.885953254	0.004920300	-0.000026541		
2P3/2			5.785280995	0.008609194	-0.000063112		
3S1/2			2.709589437	0.001519026	-0.000368072		
3P1/2			2.850002981	0.002178254	-0.000343595		
3P3/2			2.786338176	0.002217381	-0.000289266		
3D3/2			2.937893619	0.001555691	-0.000216323		
3D5/2			2.912943246	0.000696619	-0.000214161		
4S1/2			1.161962837	0.000264862	-0.000066963		
4P1/2			1.091825872	0.000337556	-0.000054664		
4P3/2			1.063280646	0.000331836	-0.000046316		
4D3/2			0.740770583	0.000100668	-0.000014421		
4D5/2			0.729274626	0.000045239	-0.000014079		
5S1/2			0.351764363	0.000019412	-0.000004934		
2P1/2 -- (2)	201.928587	-437.479411	7.176781301	0.035584416		-0.000274632	0.000003492
2P3/2			6.715173797	0.006042042	-0.000000805		
3S1/2			2.832539078	0.001057784	-0.000078387		
3P1/2			2.835982853	0.002268797	-0.000331955		
3P3/2			2.872128418	0.001033676	-0.000028255		
3D3/2			2.926632197	0.004632424	-0.001099595		
3D5/2			2.978020867	0.000155199	-0.000033747		
4S1/2			1.181603318	0.000182818	-0.000014667		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.							
4P1/2			1.091162503	0.000329438	-0.000051731		
4P3/2			1.075542163	0.000152197	-0.000004699		
4D3/2			0.740198872	0.000307661	-0.000074239		
4D5/2			0.733589236	0.000011134	-0.000002329		
5S1/2			0.353187157	0.000013382	-0.000001085		
2P3/2 -- (4)	186.077699	-415.512498	6.697570177	0.021687565		-0.000036623	0.000001126
3S1/2			2.819181561	0.001410671	-0.000084274		
3P1/2			2.923705577	0.000845084	-0.000032106		
3P3/2			2.806929343	0.002001703	-0.000169034		
3D3/2			2.988634054	0.001362114	-0.000139698		
3D5/2			2.921144739	0.002345486	-0.000664036		
4S1/2			1.179331260	0.000238917	-0.000015506		
4P1/2			1.102420969	0.000124122	-0.000005324		
4P3/2			1.066849801	0.000287481	-0.000026259		
4D3/2			0.744206614	0.000091362	-0.000009430		
4D5/2			0.729949351	0.000152340	-0.000043868		
5S1/2			0.353021156	0.000017441	-0.000001145		
3S1/2 -- (2)	53.664574	-150.535149	2.160853829	0.000727452		-0.001971057	0.000014589
3P1/2			1.940715017	0.000296907	-0.000013216		
3P3/2			1.914462858	0.000420048	-0.000020125		
3D3/2			2.112251372	0.000256997	-0.000012456		
3D5/2			2.103613502	0.000322265	-0.000012914		
4S1/2			1.045184387	0.000078249	-0.000026780		
4P1/2			0.993213875	0.000064030	-0.000011038		
4P3/2			0.969395758	0.000081590	-0.000008947		
4D3/2			0.696550068	0.000014740	-0.000001092		
4D5/2			0.686641612	0.000019543	-0.000001030		
5S1/2			0.343544517	0.000005728	-0.000002019		
3P1/2 -- (2)	51.451245	-146.397070	2.199758763	0.001362321		-0.000052427	0.000000664
3P3/2			2.062211973	0.000236747	-0.000000080		
3D3/2			2.018289244	0.000544625	-0.000046736		
3D5/2			2.162865720	0.000230959	-0.000001680		
4S1/2			1.065901294	0.000077079	-0.000009246		
4P1/2			0.975853128	0.000092888	-0.000019328		
4P3/2			0.975856821	0.000041771	-0.000001813		
4D3/2			0.695846015	0.000034146	-0.000003886		
4D5/2			0.688335475	0.000013833	-0.000000327		
5S1/2			0.344892056	0.000005485	-0.000000685		
3P3/2 -- (4)	48.088549	-141.065538	2.071493253	0.000838526		-0.000007026	0.000000215
3D3/2			2.126866324	0.000202150	-0.000004835		
3D5/2			2.043784712	0.000466730	-0.000023975		
4S1/2			1.062149123	0.000097286	-0.000010255		
4P1/2			0.996266746	0.000036741	-0.000002116		
4P3/2			0.961350553	0.000081021	-0.000009890		
4D3/2			0.696512074	0.000011562	-0.000000767		
4D5/2			0.685474137	0.000030175	-0.000002608		
5S1/2			0.344629269	0.000006872	-0.000000751		
3D3/2 -- (4)	43.706095	-133.292267	2.216127431	0.001224119		-0.000000016	0.000000001

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TECHNETIUM 4D6 5S1 Z=43 A=99 R=1.04905E-04 A.U.							
3D5/2			2.231344599	0.000230739	-0.000000001		
4S1/2			1.075261421	0.000041151	-0.000000754		
4P1/2			0.997668297	0.000069197	-0.000004115		
4P3/2			0.980555573	0.000027899	-0.000000614		
4D3/2			0.692447014	0.000044846	-0.000002872		
4D5/2			0.691451554	0.000014106	-0.000000132		
5S1/2			0.345546506	0.000002940	-0.000000066		
3D5/2 -- (6)	42.905561	-131.916089	2.206478131	0.001076669		-0.000000004	0.000000000
4S1/2			1.073964275	0.000050291	-0.000000753		
4P1/2			1.003955526	0.000029977	-0.000000303		
4P3/2			0.975968197	0.000057941	-0.000002310		
4D3/2			0.700937807	0.000011946	-0.000000139		
4D5/2			0.685073095	0.000042144	-0.000001885		
5S1/2			0.345456002	0.000003540	-0.000000066		
4S1/2 -- (2)	12.488548	-55.797483	0.847914466	0.000038840		-0.000347124	0.000002567
4P1/2			0.718582786	0.000027728	-0.000003040		
4P3/2			0.708550815	0.000023653	-0.000003778		
4D3/2			0.592343454	0.000013929	-0.000001724		
4D5/2			0.585798686	0.000008386	-0.000001704		
5S1/2			0.325147406	0.000001853	-0.000000725		
4P1/2 -- (2)	10.494490	-50.456362	0.777389666	0.000057615		-0.000008049	0.000000102
4P3/2			0.726725786	0.000010113	-0.000000005		
4D3/2			0.544631176	0.000031052	-0.000006565		
4D5/2			0.579715879	0.000003998	-0.000000216		
5S1/2			0.325765803	0.000002858	-0.000000393		
4P3/2 -- (4)	9.789480	-48.819279	0.730167636	0.000035243		-0.000001070	0.000000033
4D3/2			0.576561853	0.000009745	-0.000000767		
4D5/2			0.549898859	0.000017253	-0.000003629		
5S1/2			0.324866571	0.000003217	-0.000000429		
4D3/2 -- (4)	4.671333	-32.338530	0.484197030	0.000015995		-0.000000001	0.000000000
4D5/2			0.485322576	0.000002986	-0.000000000		
5S1/2			0.303711916	0.000000773	-0.000000000		
4D5/2 -- (2)	4.523135	-31.815159	0.478202659	0.000013741		-0.000000000	0.000000000
5S1/2			0.302501235	0.000001160	-0.000000000		
5S1/2 -- (1)	1.152084	-15.552498	0.000000000	0.000000000		-0.0000025480	0.000000188
ETOT	-4281.70933	4445.28592	-10352.96316	1623.56568	2.920040308	-0.291479377	-0.228069795 0.001750251
RUTHENIUM 4D7 5S1 Z=44 A=102 R=1.05954E-04 A.U.							
1S1/2 -- (2)	1022.230340	-2016.304350	28.160536738	1.125771240		-0.110422359	0.000921998
2S1/2			8.361717332	0.052705695	-0.005923621		
2P1/2			9.827193767	0.108037819	-0.016435743		
2P3/2			9.396329031	0.056094500	-0.016213589		
3S1/2			3.243744734	0.009391197	-0.001124747		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHENIUM 4D7 5S1 2=44 A=102 R=1.05954E-04 A.U.							
3P1/2			3.414097638	0.017551024	-0.002682392		
3P3/2			3.300801667	0.009102569	-0.002705254		
3D3/2			3.212254327	0.000322004	-0.000042102		
3D5/2			3.177806351	0.000132803	-0.000042538		
4S1/2			1.287944176	0.001690118	-0.000204567		
4P1/2			1.214340611	0.002711589	-0.000414753		
4P3/2			1.175735364	0.001393038	-0.000415802		
4D3/2			0.811255779	0.000027384	-0.000003590		
4D5/2			0.797836910	0.000011085	-0.000003567		
5S1/2			0.366697343	0.000118825	-0.000014405		
2S1/2 -- (2)	213.509819	-461.179790	6.217590904	0.017160174		-0.012127715	0.000098128
2P1/2			6.049002632	0.005324688	-0.000027570		
2P3/2			5.940437538	0.009298801	-0.000368885		
3S1/2			2.793309680	0.001664450	-0.000403726		
3P1/2			2.943560453	0.002407380	-0.000379927		
3P3/2			2.875337319	0.002431170	-0.000317560		
3D3/2			3.043499929	0.001722952	-0.000239596		
3D5/2			3.016652938	0.000771676	-0.000237196		
4S1/2			1.210176515	0.000297715	-0.000075385		
4P1/2			1.143194451	0.000385801	-0.000062529		
4P3/2			1.112005347	0.000375920	-0.000052612		
4D3/2			0.798390492	0.000121608	-0.000017448		
4D5/2			0.785761200	0.000054733	-0.000017037		
5S1/2			0.361260267	0.000020910	-0.000005323		
2P1/2 -- (2)	213.413429	-460.555562	7.378997576	0.038573851		-0.000321360	0.000004383
2P3/2			6.898113512	0.006521334	-0.000000960		
3S1/2			2.921397425	0.001157473	-0.000085790		
3P1/2			2.929521853	0.002492729	-0.000365777		
3P3/2			2.965035716	0.001132713	-0.000031023		
3D3/2			3.032167286	0.005135353	-0.001219259		
3D5/2			3.085334244	0.000172177	-0.000037419		
4S1/2			1.231141554	0.000205221	-0.000016493		
4P1/2			1.142597343	0.000373994	-0.000058975		
4P3/2			1.125240250	0.000172290	-0.000005344		
4D3/2			0.797779077	0.000372635	-0.000090008		
4D5/2			0.790739290	0.000013555	-0.000002829		
5S1/2			0.362715299	0.000014396	-0.000001170		
2P3/2 -- (4)	195.879533	-436.297258	6.873726730	0.023409795		-0.000042161	0.000001375
3S1/2			2.906826563	0.001541696	-0.000092532		
3P1/2			3.019995980	0.000926692	-0.000035432		
3P3/2			2.896460948	0.002190684	-0.000185753		
3D3/2			3.096777110	0.001510624	-0.000154802		
3D5/2			3.025125431	0.002598930	-0.000735933		
4S1/2			1.228599552	0.000267686	-0.000017475		
4P1/2			1.154545466	0.000140671	-0.000006086		
4P3/2			1.115808994	0.000324774	-0.000029832		
4D3/2			0.802335357	0.000110711	-0.000011422		
4D5/2			0.786532700	0.000184315	-0.000053128		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHENIUM 407 551 Z=44 A=102 R=1.05954E-04 A.U.							
5S1/2			0.362537326	0.000018724	-0.000001237		
3S1/2 -- (2)	57.314854	-159.197306	2.229076730	0.000801301		-0.002210520	0.000017810
3P1/2			2.004266113	0.000324097	-0.000013933		
3P3/2			1.976070238	0.000462228	-0.000021834		
3D3/2			2.185718588	0.000282272	-0.000013244		
3D5/2			2.176489156	0.000356753	-0.000013772		
4S1/2			1.087067960	0.000088640	-0.000030488		
4P1/2			1.038013479	0.000074732	-0.000012930		
4P3/2			1.012110358	0.000093716	-0.000010382		
4D3/2			0.748305345	0.000018396	-0.000001401		
4D5/2			0.737521659	0.000023842	-0.000001318		
5S1/2			0.352959543	0.000006217	-0.000002202		
3P1/2 -- (2)	55.069028	-155.031676	2.274053973	0.001506334		-0.000062275	0.000000846
3P3/2			2.130741409	0.000260370	-0.000000097		
3D3/2			2.091347225	0.000598923	-0.000049928		
3D5/2			2.240228520	0.000256751	-0.000001806		
4S1/2			1.109197403	0.000086759	-0.000010442		
4P1/2			1.019877693	0.000106352	-0.000022358		
4P3/2			1.019214622	0.000047608	-0.000002092		
4D3/2			0.747700780	0.000042985	-0.000005066		
4D5/2			0.739553578	0.000016772	-0.000000413		
5S1/2			0.354338307	0.000005917	-0.000000742		
3P3/2 -- (4)	51.327834	-149.135347	2.139240786	0.000924358		-0.000008218	0.000000267
3D3/2			2.202003710	0.000222051	-0.000005078		
3D5/2			2.116063540	0.000515163	-0.000025287		
4S1/2			1.105087945	0.000109851	-0.000011637		
4P1/2			1.041360206	0.000042053	-0.000002457		
4P3/2			1.003714054	0.000092363	-0.000011408		
4D3/2			0.748315284	0.000014427	-0.000000993		
4D5/2			0.736282418	0.000037442	-0.000003410		
5S1/2			0.354062410	0.000007433	-0.000000816		
3D3/2 -- (4)	46.932952	-141.424601	2.301392904	0.001365348		-0.000000020	0.000000001
3D5/2			2.316848310	0.000257564	-0.000000001		
4S1/2			1.119814355	0.000046559	-0.000000875		
4P1/2			1.043723233	0.000078918	-0.000004721		
4P3/2			1.024795879	0.000031821	-0.000000707		
4D3/2			0.744221129	0.000054479	-0.000003600		
4D5/2			0.743376977	0.000017210	-0.000000167		
5S1/2			0.355047536	0.000003188	-0.000000073		
3D5/2 -- (6)	46.039863	-139.902155	2.290614202	0.001199955		-0.000000005	0.000000000
4S1/2			1.118403157	0.000056792	-0.000000874		
4P1/2			1.050262983	0.000034260	-0.000000356		
4P3/2			1.019932419	0.000065893	-0.000002638		
4D3/2			0.753676154	0.000014543	-0.000000176		
4D5/2			0.736224501	0.000051114	-0.000002362		
5S1/2			0.354953025	0.000003832	-0.000000073		
4S1/2 -- (2)	13.675453	-59.630079	0.882924555	0.000044244		-0.000399474	0.000003216
4P1/2			0.750279979	0.000030903	-0.000003322		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHENIUM 4D7 5S1 Z=44 A=102 R=1.05954E-04 A.U.							
4P3/2			0.739355981	0.000026894	-0.000004205		
4D3/2			0.631806615	0.000016439	-0.000002011		
4D5/2			0.624822791	0.000010151	-0.000001992		
5S1/2			0.334649461	0.000002030	-0.000000794		
4P1/2 -- (2)	11.593337	-54.180527	0.813612693	0.000066534		-0.000009894	0.000000134
4P3/2			0.760135248	0.000011587	-0.000000007		
4D3/2			0.580696517	0.000036496	-0.000007628		
4D5/2			0.619055151	0.000004958	-0.000000252		
5S1/2			0.335423648	0.000003096	-0.000000426		
4P3/2 -- (4)	10.779246	-52.334006	0.763278351	0.000040535		-0.000001295	0.000000042
4D3/2			0.615158016	0.000011464	-0.000000882		
4D5/2			0.586262068	0.000020445	-0.000004185		
5S1/2			0.334491849	0.000003510	-0.000000468		
4D3/2 -- (4)	5.433410	-35.702533	0.522894243	0.000020100		-0.000000002	0.000000000
4D5/2			0.524046661	0.000003760	-0.000000000		
5S1/2			0.315485371	0.000000879	-0.000000000		
4D5/2 -- (3)	5.257079	-35.111410	0.516292513	0.000017252		-0.000000000	0.000000000
5S1/2			0.314291319	0.000001306	-0.000000000		
5S1/2 -- (1)	1.209026	-16.342785	0.000000000	0.000000000		-0.000028103	0.000000226
ETOT	-4526.63700	4708.24386	-10952.82351	1715.34701	3.161812051	-0.316933555	-0.251342110
RHODIUM 4D8 5S1 Z=45 A=103 R=1.06300E-04 A.U.							
1S1/2 -- (2)	1073.945621	-2115.063502	28.864085524	1.207051048		-0.121294214	0.001096552
2S1/2			8.585448925	0.056778609	-0.006392980		
2P1/2			10.099350887	0.116520409	-0.017688709		
2P3/2			9.635606721	0.060348726	-0.017444162		
3S1/2			3.345194251	0.010224107	-0.001227049		
3P1/2			3.528139811	0.019163877	-0.002922255		
3P3/2			3.406181560	0.009928626	-0.002951430		
3D3/2			3.326163094	0.000358162	-0.000046755		
3D5/2			3.288980621	0.000147595	-0.000047286		
4S1/2			1.340473044	0.001881845	-0.000228296		
4P1/2			1.270243868	0.003047904	-0.000465135		
4P3/2			1.227915281	0.001562880	-0.000466660		
4D3/2			0.867838816	0.000032949	-0.000004313		
4D5/2			0.853042050	0.000013321	-0.000004289		
5S1/2			0.376160040	0.000126867	-0.000015416		
2S1/2 -- (2)	225.375383	-484.941807	6.382823386	0.018557930		-0.013418588	0.000117527
2P1/2			6.213119709	0.005752808	-0.000028615		
2P3/2			6.096214701	0.010025240	-0.000075202		
3S1/2			2.877446477	0.001819650	-0.000041794		
3P1/2			3.037538116	0.002653205	-0.000418902		
3P3/2			2.964504989	0.002658112	-0.000347555		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
RHODIUM 4D8 5S1 Z=45 A=103 R=1.06300E-04 A.U.							
3D3/2			3.148769666	0.001901180	-0.000264390		
3D5/2			3.119914533	0.000851611	-0.000261732		
4S1/2			1.257921358	0.000332829	-0.000084397		
4P1/2			1.193899672	0.000437799	-0.000071009		
4P3/2			1.159892859	0.000422610	-0.000059315		
4D3/2			0.853269963	0.000144025	-0.000020694		
4D5/2			0.839400156	0.000064897	-0.000020204		
5S1/2			0.370626265	0.000022415	-0.000005715		
2P1/2 -- (2)	225.302363	-484.341704	7.582603450	0.041741483		-0.000374879	0.000005465
2P3/2			7.081823490	0.007025408	-0.000001141		
3S1/2			3.010745101	0.001263768	-0.000093677		
3P1/2			3.023496219	0.002731958	-0.000401964		
3P3/2			3.058150744	0.001237981	-0.000033965		
3D3/2			3.137397668	0.005671572	-0.001346861		
3D5/2			3.192195852	0.000190250	-0.000041332		
4S1/2			1.280208261	0.000229140	-0.000018444		
4P1/2			1.193379610	0.000421717	-0.000066760		
4P3/2			1.174095464	0.000193672	-0.000006032		
4D3/2			0.852629537	0.000442429	-0.000106967		
4D5/2			0.845034084	0.000016165	-0.000003367		
5S1/2			0.372109081	0.000015413	-0.000001255		
2P3/2 -- (4)	205.947251	-457.607847	7.050152216	0.025221868		-0.000048375	0.000001671
3S1/2			2.994881489	0.001681098	-0.000101378		
3P1/2			3.116666295	0.001013583	-0.000038998		
3P3/2			2.986101357	0.002391293	-0.000203560		
3D3/2			3.204539430	0.001669013	-0.000170890		
3D5/2			3.128607439	0.002868907	-0.000812531		
4S1/2			1.277378633	0.000298306	-0.000019587		
4P1/2			1.205987155	0.000158337	-0.000006907		
4P3/2			1.163916030	0.000364362	-0.000033646		
4D3/2			0.857712527	0.000131500	-0.000013559		
4D5/2			0.840262576	0.000218534	-0.000063050		
5S1/2			0.371919125	0.000020005	-0.000001329		
3S1/2 -- (2)	61.112250	-168.138133	2.297612440	0.000880418		-0.002472976	0.000021567
3P1/2			2.068100925	0.000353044	-0.000014666		
3P3/2			2.037849801	0.000507234	-0.000023672		
3D3/2			2.259142873	0.000309217	-0.000014064		
3D5/2			2.249283366	0.000393582	-0.000014670		
4S1/2			1.128600403	0.000099825	-0.000034487		
4P1/2			1.082269392	0.000086486	-0.000015010		
4P3/2			1.054145067	0.000106756	-0.000011933		
4D3/2			0.797523551	0.000022473	-0.000001755		
4D5/2			0.785776978	0.000028502	-0.000001645		
5S1/2			0.362267739	0.000006712	-0.000002388		
3P1/2 -- (2)	58.831852	-163.941660	2.348646985	0.001660812		-0.000073685	0.000001069
3P3/2			2.199443168	0.000285475	-0.000000118		
3D3/2			2.164375067	0.000656897	-0.000053286		
3D5/2			2.317509050	0.000284336	-0.000001939		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHODIUM 4D8 5S1 Z=45 A=103 R=1.06300E-04 A.U.							
4S1/2			1.152135477	0.000097112	-0.000011724		
4P1/2			1.063392538	0.000120894	-0.000025650		
4P3/2			1.061896625	0.000053851	-0.000002394		
4D3/2			0.797046881	0.000052888	-0.000006423		
4D5/2			0.788159633	0.000019933	-0.000000509		
5S1/2			0.363673576	0.000006351	-0.000000800		
3P3/2 -- (4)	54.678739	-157.433114	2.207051369	0.001015962		-0.000009572	0.000000329
3D3/2			2.276975321	0.000243210	-0.000005324		
3D5/2			2.188155799	0.000566786	-0.000026633		
4S1/2			1.147650569	0.000123344	-0.000013128		
4P1/2			1.085898425	0.000047782	-0.000002828		
4P3/2			1.045403430	0.000104522	-0.000013048		
4D3/2			0.797584933	0.000017624	-0.000001252		
4D5/2			0.784475229	0.000045463	-0.000004333		
5S1/2			0.363384770	0.000008000	-0.000000883		
3D3/2 -- (4)	50.265568	-149.770293	2.386291717	0.001516435		-0.000000026	0.000000001
3D5/2			2.401934376	0.000286249	-0.000000001		
4S1/2			1.163966404	0.000052353	-0.000001007		
4P1/2			1.089225571	0.000089358	-0.000005374		
4P3/2			1.068335543	0.000036018	-0.000000808		
4D3/2			0.793537342	0.000064879	-0.000004408		
4D5/2			0.792699821	0.000020568	-0.000000206		
5S1/2			0.364429781	0.000003438	-0.000000080		
3D5/2 -- (6)	49.271862	-148.089434	2.374289487	0.001331657		-0.000000006	0.000000000
4S1/2			1.162434445	0.000063754	-0.000001006		
4P1/2			1.096005140	0.000038865	-0.000000415		
4P3/2			1.063194554	0.000074386	-0.000002988		
4D3/2			0.803899752	0.000017352	-0.000000217		
4D5/2			0.784806611	0.000060757	-0.000002890		
5S1/2			0.364331252	0.000004126	-0.000000080		
4S1/2 -- (2)	14.903607	-63.557299	0.917592877	0.000050067		-0.000457139	0.000003983
4P1/2			0.781610496	0.000034256	-0.000003612		
4P3/2			0.769732865	0.000030375	-0.000004661		
4D3/2			0.669300825	0.000019074	-0.000002307		
4D5/2			0.661817655	0.000012053	-0.000000288		
5S1/2			0.344055312	0.000002209	-0.000000865		
4P1/2 -- (2)	12.731364	-57.991311	0.849366619	0.000076198		-0.000012062	0.000000175
4P3/2			0.793041579	0.000013161	-0.000000008		
4D3/2			0.615121944	0.000042224	-0.000008727		
4D5/2			0.656449651	0.000006010	-0.000000290		
5S1/2			0.344966889	0.000003333	-0.000000458		
4P3/2 -- (4)	11.796828	-55.915652	0.795816941	0.000046227		-0.000001552	0.000000053
4D3/2			0.651860917	0.000013265	-0.000000999		
4D5/2			0.620802875	0.000023823	-0.000004750		
5S1/2			0.344000419	0.000003805	-0.000000507		
4D3/2 -- (4)	6.214244	-39.061318	0.559591568	0.000024617		-0.000000002	0.000000000
4D5/2			0.560709528	0.000004610	-0.000000000		
5S1/2			0.326657317	0.000000986	-0.000000001		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHODIUM 408 5S1 Z=45 A=103 R=1.06300E-04 A.U.							
4D5/2 -- (4)	6.006449	-38.394615	0.552301373	0.000021102		-0.000000001	0.000000000
5S1/2			0.325464582	0.000001452	-0.000000001		
5S1/2 -- (1)	1.263221	-17.145321	0.000000000	0.000000000		-0.000030839	0.000000269
ETOT	-4779.80449	4980.93559	-11574.36411	1810.82448	3.417450033	-0.343922862	0.002501168
PALLADIUM 4D10 Z=46 A=106 R=1.07322E-04 A.U.							
1S1/2 -- (2)	1127.262540	-2216.610059	29.571834420	1.292300583		-0.132999947	0.001295636
2S1/2			8.810774939	0.061069394	-0.006888570		
2P1/2			10.373874881	0.125462279	-0.019004691		
2P3/2			9.875454515	0.064814991	-0.018736104		
3S1/2			3.447238786	0.011107110	-0.001335773		
3P1/2			3.642845164	0.020874489	-0.003175655		
3P3/2			3.511734411	0.010803352	-0.003212149		
3D3/2			3.439724418	0.000396776	-0.000051710		
3D5/2			3.399652247	0.000163371	-0.000052352		
4S1/2			1.390312708	0.002078004	-0.000252665		
4P1/2			1.321454865	0.003383503	-0.000515136		
4P3/2			1.274641026	0.001729535	-0.000516590		
4D3/2			0.886743629	0.000036203	-0.000004732		
4D5/2			0.867657987	0.000014513	-0.000004675		
2S1/2 -- (2)	237.658376	-509.430309	6.549080142	0.020037224		-0.014819595	0.000139822
2P1/2			6.378377097	0.006205703	-0.000029672		
2P3/2			6.252664580	0.010789809	-0.000082108		
3S1/2			2.961986951	0.001984980	-0.000482354		
3P1/2			3.131927797	0.002916415	-0.000460625		
3P3/2			3.053826718	0.002898474	-0.000379274		
3D3/2			3.253715827	0.002090610	-0.000290736		
3D5/2			3.222739605	0.000936514	-0.000287800		
4S1/2			1.303300978	0.000368997	-0.000093689		
4P1/2			1.240443767	0.000490515	-0.000079608		
4P3/2			1.202943022	0.000468957	-0.000065924		
4D3/2			0.871645935	0.000156010	-0.000022445		
4D5/2			0.853657506	0.000069858	-0.000021752		
2P1/2 -- (2)	237.609325	-508.855157	7.787711734	0.045095669		-0.000436041	0.000006772
2P3/2			7.266384021	0.007555071	-0.000001350		
3S1/2			3.100567828	0.001376902	-0.000102064		
3P1/2			3.117899425	0.002987060	-0.000440597		
3P3/2			3.151457045	0.001349639	-0.000037084		
3D3/2			3.242338051	0.006241744	-0.001482563		
3D5/2			3.298611324	0.000209427	-0.000045489		
4S1/2			1.326826590	0.000253742	-0.000020453		
4P1/2			1.240012996	0.000469687	-0.000074621		
4P3/2			1.217992954	0.000214729	-0.000006713		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PALLADIUM	4D10	Z=46	A=106	R=1.07322E-04	A.U.		
4D3/2			0.871032850	0.000480341	-0.000116230		
4D5/2			0.859450850	0.000017486	-0.000003636		
2P3/2 -- (4)	216.285643	-479.449909	7.226908171	0.027126826		-0.000055331	0.000002019
3S1/2			3.083328870	0.001829149	-0.000110835		
3P1/2			3.213703014	0.001105920	-0.000042811		
3P3/2			3.075833209	0.002603816	-0.000222482		
3D3/2			3.311927869	0.001837477	-0.000187979		
3D5/2			3.231599758	0.003155717	-0.000893916		
4S1/2			1.323701837	0.000329684	-0.000021770		
4P1/2			1.253165805	0.000176015	-0.000007739		
4P3/2			1.207137665	0.000403209	-0.000037420		
4D3/2			0.876223413	0.000142808	-0.000014717		
4D5/2			0.854530176	0.000235220	-0.000067920		
3S1/2 -- (2)	65.057627	-177.358971	2.366451766	0.000964997		-0.000276006	0.000025927
3P1/2			2.132212638	0.000383814	-0.000015414		
3P3/2			2.099792147	0.000555147	-0.000025652		
3D3/2			2.332533401	0.000337893	-0.000014921		
3D5/2			2.322005073	0.000432819	-0.000015613		
4S1/2			1.168333411	0.000111443	-0.000038653		
4P1/2			1.123221329	0.000098685	-0.000017170		
4P3/2			1.092324888	0.000119793	-0.000013496		
4D3/2			0.814762380	0.000025041	-0.000001995		
4D5/2			0.799405257	0.000030923	-0.000001852		
3P1/2 -- (2)	62.740563	-173.128409	2.423534621	0.001826145		-0.000086864	0.000001343
3P3/2			2.268310228	0.000312087	-0.000000143		
3D3/2			2.237374627	0.000718702	-0.000056832		
3D5/2			2.394716816	0.000313763	-0.000002081		
4S1/2			1.193186113	0.000107789	-0.000013048		
4P1/2			1.103749650	0.000135681	-0.000029023		
4P3/2			1.100665400	0.000060045	-0.000002696		
4D3/2			0.814456477	0.000059265	-0.000007374		
4D5/2			0.801938118	0.000021516	-0.000000566		
3P3/2 -- (4)	58.140181	-165.957598	2.274916118	0.001113496		-0.000011107	0.000000404
3D3/2			2.351787775	0.000265668	-0.000005574		
3D5/2			2.260064261	0.000621687	-0.000028018		
4S1/2			1.188323374	0.000137328	-0.000014684		
4P1/2			1.127095646	0.000053597	-0.000003210		
4P3/2			1.083305034	0.000116631	-0.000014699		
4D3/2			0.814868272	0.000019643	-0.000001431		
4D5/2			0.798149745	0.000050014	-0.000004950		
3D3/2 -- (4)	53.702514	-158.328136	2.470832307	0.001677609		-0.000000032	0.000000001
3D5/2			2.486611251	0.000316831	-0.000000001		
4S1/2			1.206141801	0.000058346	-0.000001144		
4P1/2			1.131354317	0.000099912	-0.000006038		
4P3/2			1.107877721	0.000040191	-0.000000909		
4D3/2			0.811189357	0.000070688	-0.000004917		
4D5/2			0.806788819	0.000022309	-0.000000229		
3D5/2 -- (6)	52.599735	-156.476170	2.457512242	0.001471946		-0.000000007	0.000000001

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PALLADIUM 4D10 Z=46 A=106 R=1.07322E-04 A.U.							
4S1/2			1.204487837	0.000070946	-0.000001144		
4P1/2			1.138320230	0.000043525	-0.000000475		
4P3/2			1.102496165	0.000082810	-0.000003335		
4D3/2			0.821631975	0.000018933	-0.000000244		
4D5/2			0.798836662	0.000065603	-0.000003197		
4S1/2 -- (2)	16.114901	-67.464567	0.950317709	0.000056011		-0.000518677	0.000004868
4P1/2			0.810606663	0.000037600	-0.000003899		
4P3/2			0.797514940	0.000033844	-0.000005123		
4D3/2			0.684205437	0.000020543	-0.000002459		
4D5/2			0.674158969	0.000013084	-0.000002427		
4P1/2 -- (2)	13.820027	-61.696040	0.881799866	0.000085793		-0.000014504	0.000000224
4P3/2			0.822598359	0.000014674	-0.000000011		
4D3/2			0.629821439	0.000045585	-0.000009347		
4D5/2			0.669243649	0.000006585	-0.000000308		
4P3/2 -- (4)	12.745234	-59.346801	0.824695712	0.000051732		-0.000001833	0.000000067
4D3/2			0.666562976	0.000014272	-0.000001059		
4D5/2			0.632894408	0.000025621	-0.000005024		
4D3/2 -- (4)	6.553457	-40.799429	0.565990461	0.000026316		-0.000000003	0.000000000
4D5/2			0.565404525	0.000004870	-0.000000000		
4D5/2 -- (6)	6.285594	-39.920481	0.555350786	0.000022264		-0.000000001	0.000000000
ETOT	-5041.32348	5263.54681	-12222.99442	1915.11032	3.686861516	-0.372468880	-0.303544541 0.002959152
SILVER 5S1 Z=47 A=107 R=1.07658E-04 A.U.							
1S1/2 -- (2)	1182.208298	-2320.981659	30.283777757	1.381617409		-0.145591683	0.001521853
2S1/2			9.037622324	0.065583001	-0.007410983		
2P1/2			10.650585570	0.134868890	-0.020383811		
2P3/2			10.115655449	0.069493572	-0.020089457		
3S1/2			3.549924774	0.012042397	-0.001451199		
3P1/2			3.758298891	0.022687219	-0.003443103		
3P3/2			3.617507993	0.011728646	-0.003487981		
3D3/2			3.553185494	0.000437988	-0.000056983		
3D5/2			3.510061506	0.000180187	-0.000057751		
4S1/2			1.444388546	0.002300996	-0.000280403		
4P1/2			1.380534508	0.003785450	-0.000574933		
4P3/2			1.330005574	0.001933218	-0.000577611		
4D3/2			0.976083748	0.000045641	-0.000005956		
4D5/2			0.958227792	0.000018400	-0.000005929		
5S1/2			0.393547784	0.000142574	-0.000017404		
2S1/2 -- (2)	250.361584	-534.650572	6.716307958	0.021600336		-0.016338244	0.000165342
2P1/2			6.544685108	0.006684055	-0.000030755		
2P3/2			6.409686510	0.011592874	-0.000089679		
3S1/2			3.046950970	0.002160922	-0.000525540		
3P1/2			3.226768474	0.003197835	-0.000505224		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SILVER	5S1	Z=47 A=107 R=1.07658E-04 A.U.					
3P3/2			3.143322114	0.003152670	-0.000412754		
3D3/2			3.358551829	0.002291937	-0.000318729		
3D5/2			3.325337011	0.001026687	-0.000315494		
4S1/2			1.352315131	0.000410214	-0.000104283		
4P1/2			1.293792487	0.000553742	-0.000089920		
4P3/2			1.253588831	0.000525255	-0.000073971		
4D3/2			0.958110585	0.000193902	-0.000027933		
4D5/2			0.941488677	0.000087507	-0.000027253		
5S1/2			0.387876043	0.000025390	-0.000006491		
2P1/2 -- (2)	250.331848	-534.095222	7.994161771	0.048640253		-0.000505740	0.000008343
2P3/2			7.451629367	0.008110358	-0.000001591		
3S1/2			3.190886738	0.001497212	-0.000110978		
3P1/2			3.212764162	0.003258810	-0.000481809		
3P3/2			3.244974015	0.001467925	-0.000040389		
3D3/2			3.347193312	0.006847977	-0.001626867		
3D5/2			3.404798423	0.000229778	-0.000049908		
4S1/2			1.377244523	0.000281773	-0.000022742		
4P1/2			1.293455411	0.000527230	-0.000084050		
4P3/2			1.269712538	0.000240451	-0.000007544		
4D3/2			0.957439510	0.000598392	-0.000144922		
4D5/2			0.948427538	0.000022015	-0.000004571		
5S1/2			0.389399834	0.000017419	-0.000001423		
2P3/2 -- (4)	226.885101	-501.813091	7.403821888	0.029124990		-0.000063092	0.000002428
3S1/2			3.172185959	0.001986214	-0.000120945		
3P1/2			3.311141235	0.001203938	-0.000046885		
3P3/2			3.165669719	0.002828666	-0.000242570		
3D3/2			3.419159809	0.002016646	-0.000206128		
3D5/2			3.334305640	0.003460385	-0.000980380		
4S1/2			1.373783387	0.000365365	-0.000024265		
4P1/2			1.307295300	0.000197192	-0.000008738		
4P3/2			1.258003476	0.000450658	-0.000042026		
4D3/2			0.963525927	0.000177949	-0.000018327		
4D5/2			0.942514813	0.000294608	-0.000085141		
5S1/2			0.389186306	0.000022514	-0.000001514		
3S1/2 -- (2)	69.156199	-186.866264	2.435599855	0.001055314		-0.003073626	0.000030967
3P1/2			2.196613297	0.000416491	-0.000016177		
3P3/2			2.161901356	0.000606079	-0.000027784		
3D3/2			2.405983957	0.000368381	-0.000015813		
3D5/2			2.394746972	0.000474592	-0.000016600		
4S1/2			1.210855934	0.000124706	-0.000043408		
4P1/2			1.169548000	0.000113360	-0.000019768		
4P3/2			1.136543802	0.000135643	-0.000015395		
4D3/2			0.891410241	0.000032033	-0.000002606		
4D5/2			0.877524139	0.000039037	-0.000002429		
5S1/2			0.379476145	0.000007705	-0.000002760		
3P1/2 -- (2)	66.800745	-182.598958	2.498731836	0.002002908		-0.000102047	0.000001675
3P3/2			2.337350182	0.000340256	-0.000000172		
3D3/2			2.310443191	0.000784494	-0.000060557		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SILVER	5S1	Z=47	A=107	R=1.07658E-04	A.U.		
	3D5/2			2.471947992	0.000345132	-0.000002231	
	4S1/2			1.237187227	0.000119938	-0.000014554	
	4P1/2			1.149269753	0.000153406	-0.000033065	
	4P3/2			1.145599518	0.000067588	-0.000003064	
	4D3/2			0.891255859	0.000076202	-0.000009712	
	4D5/2			0.880646790	0.000027013	-0.000000733	
	5S1/2			0.380922144	0.000007213	-0.000000914	
3P3/2 -- (4)	61.714661	-174.711764	2.342834055	0.001212701		-0.000012839	0.000000492
	3D3/2			2.426526795	0.000289467	-0.000005826	
	3D5/2			2.331874492	0.000680008	-0.000029432	
	4S1/2			1.231892749	0.000153267	-0.000016462	
	4P1/2			1.173700200	0.000060563	-0.000003669	
	4P3/2			1.127114623	0.000131387	-0.000016709	
	4D3/2			0.891574022	0.000025131	-0.000001877	
	4D5/2			0.876105182	0.000064023	-0.000006580	
	5S1/2			0.380608587	0.000009132	-0.000001018	
3D3/2 -- (4)	57.250391	-167.108727	2.555201387	0.001849498		-0.000000039	0.000000002
	3D5/2			2.571065529	0.000349424	-0.000000001	
	4S1/2			1.251322622	0.000065161	-0.000001301	
	4P1/2			1.178956673	0.000112517	-0.000006832	
	4P3/2			1.153671279	0.000045267	-0.000001032	
	4D3/2			0.887781901	0.000088276	-0.000006289	
	4D5/2			0.886633941	0.000028135	-0.000000297	
	5S1/2			0.381750246	0.000003934	-0.000000095	
3D5/2 -- (6)	56.029494	-165.072161	2.540465510	0.001621336		-0.000000009	0.000000001
	4S1/2			1.249528267	0.000079123	-0.000001301	
	4P1/2			1.186180693	0.000049093	-0.000000547	
	4P3/2			1.147968508	0.000093050	-0.000003758	
	4D3/2			0.899845654	0.000023683	-0.000000314	
	4D5/2			0.877315012	0.000082330	-0.000004114	
	5S1/2			0.381643908	0.000004709	-0.000000095	
4S1/2 -- (2)	17.486988	-71.706893	0.986119571	0.000063033		-0.000590022	0.000005940
	4P1/2			0.843420116	0.000041527	-0.000004220	
	4P3/2			0.829440855	0.000038086	-0.000005664	
	4D3/2			0.740771001	0.000024803	-0.000002933	
	4D5/2			0.732153781	0.000016329	-0.000002919	
	5S1/2			0.361530431	0.000002568	-0.000001003	
4P1/2 -- (2)	15.129083	-65.889014	0.919793975	0.000097885		-0.000017555	0.000000288
	4P3/2			0.857640305	0.000016620	-0.000000013	
	4D3/2			0.681061533	0.000054732	-0.000011075	
	4D5/2			0.727747508	0.000008423	-0.000000370	
	5S1/2			0.362669495	0.000003796	-0.000000520	
4P3/2 -- (4)	13.915735	-63.289946	0.859469950	0.000058845		-0.000002184	0.000000084
	4D3/2			0.721818364	0.000017165	-0.000001240	
	4D5/2			0.686544887	0.000031243	-0.000005928	
	5S1/2			0.361631943	0.000004394	-0.000000584	
4D3/2 -- (4)	7.853391	-45.887327	0.629551933	0.000035049		-0.000000004	0.000000000
	4D5/2			0.630460769	0.000006567	-0.000000000	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SILVER 5S1 Z=47 A=107 R=1.07658E-04 A.U.							
4D5/2 -- (6)	7.572221	-45.046877	0.346852278	0.000001201	-0.000000003	-0.000000001	0.000000000
5S1/2 -- (1)	1.363239	-18.733437	0.620676627	0.0000029946	-0.000000002	-0.0000036585	0.000000368
ETOT	-5311.33467	5556.40013	-12884.26825	2013.29298	3.972293329	-0.402729073	0.003481214
CADMIUM 5S2 Z=48 A=114 R=1.09956E-04 A.U.							
1S1/2 -- (2)	1238.814748	-2428.218031	31.000076568	1.475113552		-0.159113611	0.001778043
2S1/2			9.266107061	0.070327733	-0.007961366		
2P1/2			10.929706538	0.144760160	-0.021828337		
2P3/2			10.356351824	0.074392023	-0.021506423		
3S1/2			3.653320984	0.013032102	-0.001573637		
3P1/2			3.874600384	0.024606286	-0.003725045		
3P3/2			3.723592961	0.012706552	-0.003779520		
3D3/2			3.666645249	0.000481893	-0.000062585		
3D5/2			3.620305543	0.000198079	-0.000063497		
4S1/2			1.499528378	0.002542531	-0.000310522		
4P1/2			1.441212332	0.004225525	-0.000640162		
4P3/2			1.386918144	0.002156694	-0.000644574		
4D3/2			1.060719338	0.000056189	-0.000007320		
4D5/2			1.043024838	0.000022722	-0.000007324		
5S1/2			0.432677772	0.000183558	-0.000022458		
2S1/2 -- (2)	263.499671	-560.620574	6.884586022	0.023251096		-0.017981995	0.000194458
2P1/2			6.712151401	0.007189030	-0.000031855		
2P3/2			6.567365780	0.012435924	-0.000097964		
3S1/2			3.132394277	0.002347994	-0.000571473		
3P1/2			3.322142045	0.003498471	-0.000552852		
3P3/2			3.233071404	0.003421229	-0.000448051		
3D3/2			3.463377736	0.002505604	-0.000348430		
3D5/2			3.427806013	0.001122316	-0.000344874		
4S1/2			1.402197984	0.000455056	-0.000115816		
4P1/2			1.348436818	0.000623564	-0.000101307		
4P3/2			1.305544978	0.000587048	-0.000082804		
4D3/2			1.039792581	0.000235523	-0.000033971		
4D5/2			1.023501826	0.000106844	-0.000033282		
5S1/2			0.425693765	0.000032815	-0.000008401		
2P1/2 -- (2)	263.487519	-560.083414	8.202121786	0.052384817		-0.000585008	0.000010224
2P3/2			7.637689662	0.008692197	-0.000001869		
3S1/2			3.281765557	0.001625041	-0.000120441		
3P1/2			3.308174949	0.003548068	-0.000525725		
3P3/2			3.338788556	0.001593124	-0.000043885		
3D3/2			3.452066355	0.007491578	-0.001780084		
3D5/2			3.510857730	0.000251335	-0.000054595		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CADMIUM	5S2	Z=48 A=114 R=1.09956E-04 A.U.					
4S1/2			1.428587655	0.000312250	-0.000025232		
4P1/2			1.348203378	0.000590519	-0.000094442		
4P3/2			1.322802207	0.000268715	-0.000008459		
4D3/2			1.039076925	0.000728457	-0.000176570		
4D5/2			1.031609088	0.000027005	-0.000005599		
5S1/2			0.427572076	0.000022488	-0.000001840		
2P3/2 -- (4)	237.753051	-524.706027	7.581003802	0.031219868		-0.000071732	0.000002907
3S1/2			3.261511974	0.002152707	-0.000131740		
3P1/2			3.409064221	0.001307898	-0.000051233		
3P3/2			3.255691293	0.003066362	-0.000263871		
3D3/2			3.526334860	0.002206908	-0.000225374		
3D5/2			3.436823978	0.003783535	-0.001072100		
4S1/2			1.424761046	0.000404047	-0.000026988		
4P1/2			1.362744333	0.000220412	-0.000009840		
4P3/2			1.310178989	0.000502697	-0.000047098		
4D3/2			1.046056448	0.000216664	-0.000022300		
4D5/2			1.024675217	0.000359638	-0.000104022		
5S1/2			0.427297062	0.000029001	-0.000001962		
3S1/2 -- (2)	73.413275	-196.667260	2.505114670	0.001151676		-0.003415711	0.000036772
3P1/2			2.261363762	0.000451170	-0.000016955		
3P3/2			2.224237108	0.000660174	-0.000030081		
3D3/2			2.479574762	0.000400774	-0.000016743		
3D5/2			2.467589391	0.000519019	-0.000017635		
4S1/2			1.254036177	0.000139205	-0.000048614		
4P1/2			1.216854621	0.000129780	-0.000022676		
4P3/2			1.181762972	0.000153145	-0.000017501		
4D3/2			0.963224830	0.000039995	-0.000003316		
4D5/2			0.949862085	0.000048024	-0.000003097		
5S1/2			0.415456888	0.000010019	-0.000003603		
3P1/2 -- (2)	71.018032	-192.361314	2.574320708	0.002191732		-0.000119495	0.000002078
3P3/2			2.406638021	0.000370041	-0.000000206		
3D3/2			2.383662510	0.000854497	-0.000064482		
3D5/2			2.549295244	0.000378533	-0.000002390		
4S1/2			1.281897295	0.000133154	-0.000016195		
4P1/2			1.195738816	0.000173004	-0.000037553		
4P3/2			1.191572983	0.000075893	-0.000003472		
4D3/2			0.963267494	0.000095552	-0.000012440		
4D5/2			0.953609023	0.000033058	-0.000000924		
5S1/2			0.417233723	0.000009324	-0.000001186		
3P3/2 -- (4)	65.405653	-183.700826	2.410881430	0.001327376		-0.000014790	0.000000596
3D3/2			2.501283092	0.000314677	-0.000006080		
3D5/2			2.403672242	0.000741910	-0.000030879		
4S1/2			1.276137866	0.000170661	-0.000018413		
4P1/2			1.221282457	0.000068257	-0.000004180		
4P3/2			1.171892146	0.000147672	-0.000018940		
4D3/2			0.963448365	0.000031388	-0.000002398		
4D5/2			0.948284785	0.000079798	-0.000008484		
5S1/2			0.416836654	0.000011831	-0.000001326		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CADMIUM 5S2 Z=48 A=114 R=1.09956E-04 A.U.							
3D3/2 -- (4)	60.911659	-176.116519	2.639499094	0.002032565		-0.000000048	0.000000003
3D5/2			2.655398830	0.000384113	-0.000000002		
4S1/2			1.297210752	0.000072581	-0.000001474		
4P1/2			1.227568877	0.000126389	-0.000007710		
4P3/2			1.200515043	0.000050861	-0.000001168		
4D3/2			0.959650217	0.000107715	-0.000007846		
4D5/2			0.960775513	0.000034571	-0.000000374		
5S1/2			0.418276125	0.000005103	-0.000000126		
3D5/2 -- (6)	59.563161	-173.881283	2.623250177	0.001780204		-0.000000011	0.000000001
4S1/2			1.295264752	0.000088019	-0.000001474		
4P1/2			1.235057845	0.000055223	-0.000000628		
4P3/2			1.194468494	0.000104313	-0.000004223		
4D3/2			0.973301530	0.000028942	-0.000000394		
4D5/2			0.950103123	0.000100698	-0.000005150		
5S1/2			0.418141760	0.000006098	-0.000000126		
4S1/2 -- (2)	18.946186	-76.129658	1.022617085	0.000070788		-0.000669609	0.000007202
4P1/2			0.876977569	0.000045783	-0.000004556		
4P3/2			0.862120432	0.000042784	-0.000006255		
4D3/2			0.793169771	0.000029294	-0.000003418		
4D5/2			0.785205982	0.000019882	-0.000003421		
5S1/2			0.393998975	0.000003380	-0.000001334		
4P1/2 -- (2)	16.535311	-70.285005	0.958787192	0.000111437		-0.000021175	0.000000368
4P3/2			0.893624219	0.000018784	-0.000000017		
4D3/2			0.728947645	0.000064365	-0.000012842		
4D5/2			0.781635620	0.000010498	-0.000000435		
5S1/2			0.395522842	0.000004931	-0.000000680		
4P3/2 -- (4)	15.172880	-67.423017	0.895210052	0.000066815		-0.000002592	0.000000104
4D3/2			0.773309728	0.000020214	-0.000001420		
4D5/2			0.735981060	0.000037236	-0.000006823		
5S1/2			0.394271645	0.000005742	-0.000000769		
4D3/2 -- (4)	9.216556	-50.928275	0.688227318	0.000044997		-0.000000006	0.000000000
4D5/2			0.690069366	0.000008502	-0.000000000		
5S1/2			0.380743417	0.000001662	-0.000000010		
4D5/2 -- (6)	8.911564	-50.077465	0.680135872	0.000038646		-0.000000001	0.000000000
5S1/2			0.379641513	0.000002336	-0.000000008		
5S1/2 -- (2)	1.717997	-21.068256	0.307441468	0.000001482		-0.000048379	0.000000520
ETOT	-5589.78202	5859.55302	-13566.11817	2113.30470	4.273312575	-0.434705735	-0.364266719
INDIUM 5P1 Z=49 A=115 R=1.10277E-04 A.U.							
1S1/2 -- (2)	1297.135278	-2538.386362	31.721008490	1.572923095		-0.173634943	0.002067270
2S1/2			9.496299218	0.075311734	-0.008540757		
2P1/2			11.211333057	0.155151828	-0.023339849		
2P3/2			10.597562918	0.079515496	-0.022988490		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
INDIUM 5P1 Z=49 A=115 R=1.10277E-04 A.U.							
3S1/2			3.757425781	0.014077793	-0.001703329		
3P1/2			3.991741603	0.026634625	-0.004021762		
3P3/2			3.829972659	0.013738424	-0.004087190		
3D3/2			3.780123475	0.000928546	-0.000068518		
3D5/2			3.730402555	0.000217066	-0.000069596		
4S1/2			1.555528240	0.002802890	-0.000343068		
4P1/2			1.503153322	0.004703940	-0.000710798		
4P3/2			1.445046529	0.002400105	-0.000717528		
4D3/2			1.145083204	0.000068193	-0.000008869		
4D5/2			1.127296862	0.000027641	-0.000008913		
5S1/2			0.484928028	0.000247536	-0.000030355		
5P1/2			0.342877169	0.000202127	-0.000030546		
2S1/2 -- (2)	277.085590	-587.357019	7.053955997	0.024993081		-0.019761073	0.000227570
2P1/2			6.880819195	0.007721706	-0.000032975		
2P3/2			6.725724004	0.013320080	-0.000107035		
3S1/2			3.218319113	0.002546625	-0.000620252		
3P1/2			3.418046527	0.003819051	-0.000603625		
3P3/2			3.323069891	0.003704417	-0.000485181		
3D3/2			3.568222047	0.002731962	-0.000379886		
3D5/2			3.530174049	0.001223538	-0.000375987		
4S1/2			1.452772477	0.000503613	-0.000128311		
4P1/2			1.404083653	0.000700142	-0.000113794		
4P3/2			1.358521498	0.000654369	-0.000092422		
4D3/2			1.121028121	0.000282223	-0.000040756		
4D5/2			1.104834699	0.000128591	-0.000040067		
5S1/2			0.475911135	0.000044422	-0.000011387		
5P1/2			0.338631933	0.000030207	-0.000004925		
2P1/2 -- (2)	277.087926	-586.834659	8.411645132	0.056337380		-0.000675014	0.000012466
2P3/2			7.824588040	0.009301202	-0.000002189		
3S1/2			3.373205691	0.001760677	-0.000130472		
3P1/2			3.404128671	0.003855499	-0.000572439		
3P3/2			3.432893648	0.001725415	-0.000047576		
3D3/2			3.556984780	0.008173540	-0.001942453		
3D5/2			3.616812558	0.000274117	-0.000059557		
4S1/2			1.480671766	0.000345230	-0.000027927		
4P1/2			1.403964236	0.000659655	-0.000105816		
4P3/2			1.376963680	0.000299547	-0.000009458		
4D3/2			1.120278052	0.000874757	-0.000212201		
4D5/2			1.114179158	0.000032642	-0.000006760		
5S1/2			0.478338522	0.000030411	-0.000002492		
5P1/2			0.338638249	0.000028230	-0.000004570		
2P3/2 -- (4)	248.891011	-548.130734	7.758458822	0.033413865		-0.000081330	0.000003464
3S1/2			3.351304315	0.002328952	-0.000143252		
3P1/2			3.507462908	0.001417982	-0.000055867		
3P3/2			3.345888292	0.003317225	-0.000286417		
3D3/2			3.633475872	0.002408560	-0.000245744		
3D5/2			3.539177920	0.004125634	-0.001169211		
4S1/2			1.476449864	0.000445780	-0.000029947		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
INDIUM	5P1	Z=49 A=115 R=1.10277E-04 A.U.					
4P1/2			1.419210710	0.000245694	-0.000011049		
4P3/2			1.363370001	0.000559352	-0.000052642		
4D3/2			1.128178625	0.000260202	-0.000026764		
4D5/2			1.106154070	0.000432736	-0.000125266		
5S1/2			0.477967430	0.000039127	-0.000002664		
5P1/2			0.339278483	0.000010532	-0.000000481		
3S1/2 -- (2)	77.831482	-206.765592	2.575001696	0.001254332		-0.003788607	0.000043430
3P1/2			2.326466179	0.000487938	-0.000017749		
3P3/2			2.286800407	0.000717528	-0.000032558		
3D3/2			2.553325592	0.000435147	-0.000017715		
3D5/2			2.540552007	0.000566192	-0.000018722		
4S1/2			1.297742328	0.000154980	-0.000054286		
4P1/2			1.264913722	0.000148028	-0.000025910		
4P3/2			1.227757899	0.000172330	-0.000019817		
4D3/2			1.034177176	0.000049198	-0.000004150		
4D5/2			1.021125716	0.000058223	-0.000003880		
5S1/2			0.462830024	0.000013641	-0.000004923		
5P1/2			0.332770263	0.000006619	-0.000001188		
3P1/2 -- (2)	75.394411	-202.418265	2.650303302	0.002393088		-0.000139500	0.000002563
3P3/2			2.476173520	0.000401475	-0.000000246		
3D3/2			2.457044599	0.000928883	-0.000068624		
3D5/2			2.626775475	0.000414033	-0.000002559		
4S1/2			1.327175289	0.000147467	-0.000017974		
4P1/2			1.242941059	0.000194526	-0.000042500		
4P3/2			1.238356439	0.000084971	-0.000003921		
4D3/2			1.034459891	0.000117964	-0.000015654		
4D5/2			1.025551877	0.000039880	-0.000001146		
5S1/2			0.465116643	0.000012621	-0.000001612		
5P1/2			0.331953040	0.000008245	-0.000001876		
3P3/2 -- (4)	69.213039	-192.924772	2.479057931	0.001444214		-0.000016982	0.000000720
3D3/2			2.576072142	0.000341344	-0.000006337		
3D5/2			2.475470957	0.000807504	-0.000032364		
4S1/2			1.320918145	0.000189557	-0.000020544		
4P1/2			1.269610884	0.000076697	-0.000004746		
4P3/2			1.217417367	0.000165515	-0.000021397		
4D3/2			1.034460090	0.000038631	-0.000003011		
4D5/2			1.019381637	0.000097942	-0.000010739		
5S1/2			0.464589593	0.000016048	-0.000001809		
5P1/2			0.332951087	0.000003274	-0.000000219		
3D3/2 -- (4)	64.686634	-185.352474	2.723753556	0.002227167		-0.000000059	0.000000003
3D5/2			2.739639670	0.000420961	-0.000000002		
4S1/2			1.343661883	0.000080622	-0.000001663		
4P1/2			1.276958930	0.000141554	-0.000008674		
4P3/2			1.248175692	0.000056983	-0.000001319		
4D3/2			1.030737197	0.000129638	-0.000009639		
4D5/2			1.033974317	0.000041859	-0.000000463		
5S1/2			0.466485265	0.000006929	-0.000000174		
5P1/2			0.333291937	0.000005804	-0.000000368		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
INDIUM 5P1 Z=49 A=115 R=1.10277E-04 A.U.								
3D5/2 -- (6)	63.200636	-182.903922	2.705894494	0.001948828		-0.000000014	0.000000001	
4S1/2			1.341553183	0.000097649	-0.000001664			
4P1/2			1.284714851	0.000061926	-0.000000718			
4P3/2			1.241765659	0.000116615	-0.000004732			
4D3/2			1.046009122	0.000034881	-0.000000487			
4D5/2			1.021896931	0.000121392	-0.000006344			
5S1/2			0.466307230	0.000008266	-0.000000174			
5P1/2			0.333579173	0.000002593	-0.000000036			
4S1/2 --- (2)	20.490016	-80.725836	1.059670369	0.000079300		-0.000758068	0.000008682	
4P1/2			0.911123254	0.000050371	-0.000004907			
4P3/2			0.895402067	0.000047954	-0.000006897			
4D3/2			0.844508048	0.000034170	-0.000003932			
4D5/2			0.837003061	0.000023883	-0.000003956			
5S1/2			0.435970248	0.000004661	-0.000001865			
5P1/2			0.321747603	0.000001331	-0.000000247			
4P1/2 -- (2)	18.034786	-74.872314	0.998570533	0.000126501		-0.000025444	0.000000467	
4P3/2			0.930360174	0.000021172	-0.000000021			
4D3/2			0.776171711	0.000074819	-0.000014709			
4D5/2			0.834524336	0.000012891	-0.000000505			
5S1/2			0.438060424	0.000006708	-0.000000932			
5P1/2			0.318319089	0.000002612	-0.000000614			
4P3/2 -- (4)	16.512508	-71.734104	0.931728632	0.000075672		-0.000003066	0.000000130	
4D3/2			0.824000107	0.000023526	-0.000001605			
4D5/2			0.784520066	0.000043843	-0.000007748			
5S1/2			0.436489782	0.000007854	-0.000001061			
5P1/2			0.320956172	0.000001067	-0.000000070			
4D3/2 -- (4)	10.689791	-56.125440	0.746298585	0.000056661		-0.000000008	0.000000000	
4D5/2			0.748945732	0.000010783	-0.000000000			
5S1/2			0.423514682	0.000002392	-0.000000024			
5P1/2			0.312906257	0.000002643	-0.000000194			
4D5/2 -- (6)	10.357882	-55.252140	0.738762271	0.000048855		-0.000000002	0.000000000	
5S1/2			0.422422694	0.000003255	-0.000000021			
5P1/2			0.315379869	0.000000910	-0.000000008			
5S1/2 -- (2)	2.269658	-24.159257	0.344706866	0.000002126		-0.000067004	0.000000767	
5P1/2			0.251510547	0.000002042	-0.000000299			
5P1/2 -- (1)	1.050077	-16.853384	0.000000000	0.000000000		-0.0000001098	0.000000020	
ETOT	-5876.65149	6173.03141	-14265.89846	2212.48692	4.590484842	-0.468479503	-0.398106275	0.004743727
TIN 5P2 Z=50 A=118 R=1.11228E-04 A.U.								
1S1/2 -- (2)	1357.197454	-2651.522604	32.446628071	1.675149597		-0.189204029	0.002392844	
2S1/2			9.728240389	0.080542265	-0.009150154			
2P1/2			11.495536324	0.166058957	-0.024919751			
2P3/2			10.839292532	0.084868693	-0.024536993			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TIN	5P2	Z=50 A=118 R=1.11228E-04 A.U.					
			3.862296361	0.015182392	-0.001840600		
			4.109814788	0.028776910	-0.004333760		
			3.936710247	0.014826377	-0.004411620		
			3.893721766	0.000578063	-0.000074796		
			3.840447644	0.000237194	-0.000076060		
			1.612523603	0.003083821	-0.000378270		
			1.566313579	0.005223272	-0.000787167		
			1.504246984	0.002664603	-0.000796820		
			1.225522775	0.000081294	-0.000010554		
			1.207177218	0.000032994	-0.000010643		
			0.529546069	0.000312436	-0.000038400		
			0.397898275	0.000300038	-0.000045221		
2S1/2 -- (2)	291.130244	-614.873922	7.224446283	0.026829794		-0.021683625	0.000265114
			7.050722086	0.008283146	-0.000034114		
			6.884775729	0.014246447	-0.000116964		
			3.304763058	0.002757373	-0.0000672018		
			3.514542461	0.004160636	-0.0000657699		
			3.413363664	0.004002744	-0.0000524192		
			3.673176359	0.002971563	-0.0000413170		
			3.632527990	0.001330586	-0.0000408906		
			1.504145021	0.000556241	-0.000141862		
			1.460676979	0.000783996	-0.000127466		
			1.412376147	0.000727532	-0.000102869		
			1.198323341	0.000332425	-0.000048059		
			1.181783304	0.000151961	-0.000047362		
			0.518639012	0.000056282	-0.000014446		
			0.391848115	0.000045229	-0.000007379		
2P1/2 -- (2)	291.144087	-614.363353	8.622777764	0.060505988		-0.000776990	0.000015130
			8.012343143	0.009937959	-0.000002555		
			3.465250838	0.001904498	-0.000141098		
			3.500685600	0.004182034	-0.000622097		
			3.527339834	0.001865085	-0.000051470		
			3.662039488	0.008895505	-0.002114362		
			3.722753149	0.000298171	-0.000064807		
			1.533611382	0.000380953	-0.000030846		
			1.460682415	0.000735074	-0.000118248		
			1.432055054	0.000333099	-0.000010548		
			1.197554230	0.001032459	-0.000250649		
			1.192366438	0.000038728	-0.000008012		
			0.521578055	0.000038494	-0.000003160		
			0.391865924	0.000042040	-0.000006829		
2P3/2 -- (4)	260.300008	-572.088739	7.936190820	0.035709311		-0.000091968	0.000004111
			3.441601967	0.002515385	-0.000155521		
			3.606397511	0.001534469	-0.000060800		
			3.436304700	0.003581765	-0.000310262		
			3.740675088	0.002622091	-0.000267281		
			3.641452234	0.004487463	-0.001271933		
			1.528961427	0.000490850	-0.000033165		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TIN	5P2	Z=50	A=118 R=1.11228E-04 A.U.				
			4P1/2	1.476637825	0.000273182	-0.000012373	
			4P3/2	1.417432577	0.000620885	-0.000058686	
			4D3/2	1.206349912	0.000307118	-0.000031568	
			4D5/2	1.183236115	0.000511232	-0.000148103	
			5S1/2	0.521109272	0.000049407	-0.000003385	
			5P1/2	0.392759697	0.000015652	-0.000000721	
3S1/2 --	(2)	82.416652	-217.168706	2.645289628	0.001363605	-0.0004194487	0.000051044
			3P1/2	2.391954841	0.000526891	-0.000018558	
			3P3/2	2.349619222	0.000778280	-0.000035229	
			3D3/2	2.627289454	0.000471592	-0.000018729	
			3D5/2	2.613686166	0.000616235	-0.000019865	
			4S1/2	1.342042250	0.000172155	-0.000060470	
			4P1/2	1.313660490	0.000168261	-0.000029496	
			4P3/2	1.274391722	0.000193296	-0.000022358	
			4D3/2	1.101339476	0.000059410	-0.000005090	
			4D5/2	1.088206638	0.000069293	-0.000004759	
			5S1/2	0.502973091	0.000017378	-0.000006293	
			5P1/2	0.383580214	0.000010074	-0.000001813	
3P1/2 --	(2)	79.936230	-212.778136	2.726725168	0.002607658	-0.000162384	0.000003145
			3P3/2	2.545993508	0.000434614	-0.000000293	
			3D3/2	2.530646927	0.001007861	-0.000072994	
			3D5/2	2.704447603	0.000451728	-0.000002738	
			4S1/2	1.373097931	0.000162979	-0.000019904	
			4P1/2	1.290811164	0.000218122	-0.000047947	
			4P3/2	1.285813824	0.000094867	-0.000004415	
			4D3/2	1.101902060	0.000142882	-0.000019285	
			4D5/2	1.093335433	0.000047242	-0.000001392	
			5S1/2	0.505729850	0.000015988	-0.000002050	
			5P1/2	0.382456584	0.000012348	-0.000002832	
3P3/2 --	(4)	73.140060	-202.387873	2.547394807	0.001568008	-0.000019438	0.000000864
			3D3/2	2.650947091	0.000369526	-0.000006596	
			3D5/2	2.547321171	0.000876942	-0.000033884	
			4S1/2	1.366306821	0.000210098	-0.000022872	
			4P1/2	1.318619563	0.000085941	-0.000005371	
			4P3/2	1.263552847	0.000185016	-0.000024099	
			4D3/2	1.101676708	0.000046683	-0.000003704	
			4D5/2	1.086296080	0.000117916	-0.000013297	
			5S1/2	0.505074384	0.000020370	-0.000002310	
			5P1/2	0.383833969	0.000004901	-0.000000333	
3D3/2 --	(4)	68.578697	-194.821739	2.808040997	0.002433824	-0.000000072	0.000000004
			3D5/2	2.823863090	0.000460059	-0.000000003	
			4S1/2	1.390758231	0.000089341	-0.000001870	
			4P1/2	1.327064504	0.000158107	-0.000009731	
			4P3/2	1.296517063	0.000063664	-0.000001483	
			4D3/2	1.098128508	0.000153343	-0.000011622	
			4D5/2	1.103024656	0.000049750	-0.000000563	
			5S1/2	0.507406786	0.000008802	-0.000000226	
			5P1/2	0.384353878	0.000008645	-0.000000553	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
TIN	5P2	Z=50	A=118 R=1.11228E-04 A.U.					
3D5/2 -- (6)	66.944700	-192.144397	2.788471006	0.002127621		-0.000000016	0.000000001	
4S1/2			1.388474713	0.000108081	-0.000001872			
4P1/2			1.335088407	0.000069243	-0.000000817			
4P3/2			1.289723786	0.000130016	-0.000005289			
4D3/2			1.114956879	0.000041312	-0.000000590			
4D5/2			1.089573405	0.000143679	-0.000007660			
5S1/2			0.507185702	0.000010484	-0.000000226			
5P1/2			0.384747308	0.000003870	-0.000000056			
4S1/2 -- (2)	22.126676	-85.506933	1.097322610	0.000088651		-0.0000856381	0.000010412	
4P1/2			0.945824408	0.000055312	-0.000005272			
4P3/2			0.929212122	0.000053631	-0.000007595			
4D3/2			0.893039805	0.000039268	-0.000004452			
4D5/2			0.885686149	0.000028209	-0.000004498			
5S1/2			0.471436586	0.000006017	-0.000002437			
5P1/2			0.368376226	0.000002060	-0.000000390			
4P1/2 -- (2)	19.631761	-79.653108	1.039016986	0.000143198		-0.000030464	0.000000589	
4P3/2			0.967694501	0.000023793	-0.000000026			
4D3/2			0.821202599	0.000085790	-0.000016611			
4D5/2			0.884498461	0.000015534	-0.000000576			
5S1/2			0.474092672	0.000008550	-0.000001197			
5P1/2			0.363820373	0.000003970	-0.000000962			
4P3/2 -- (4)	17.936274	-76.219802	0.968827496	0.000085469		-0.000003613	0.000000160	
4D3/2			0.872146485	0.000026993	-0.000001786			
4D5/2			0.830452619	0.000050860	-0.000008663			
5S1/2			0.472238223	0.000010071	-0.000001372			
5P1/2			0.367332378	0.000001626	-0.000000111			
4D3/2 -- (4)	12.209275	-61.295281	0.800716934	0.000069542		-0.000000010	0.000000001	
4D5/2			0.803917647	0.000013300	-0.000000000			
5S1/2			0.460075235	0.000003193	-0.000000044			
5P1/2			0.358308893	0.000004120	-0.000000332			
4D5/2 -- (6)	11.843483	-60.375898	0.793324722	0.000060091		-0.000000002	0.000000000	
5S1/2			0.458967602	0.000004232	-0.000000041			
5P1/2			0.361082828	0.000001376	-0.000000014			
5S1/2 -- (2)	2.805698	-26.971712	0.375708036	0.000002799		-0.0000086841	0.000001056	
5P1/2			0.283990060	0.000002830	-0.000000410			
5P1/2 -- (2)	1.500088	-19.971859	0.278999362	0.000002302		-0.000001758	0.000000034	
ETOT	-6172.09530	6497.16413	-14987.99617	2314.74536	4.924448719	-0.504109460	-0.434454436	0.005499306
ANTIMONY	5P3	Z=51	A=121 R=1.12162E-04 A.U.					
1S1/2 -- (2)	1419.044956	-2767.682155	33.177117528	1.781915857		-0.205884469	0.002758337	
2S1/2			9.961991562	0.086027342	-0.009790623			
2P1/2			11.782416835	0.177498046	-0.026569647			
2P3/2			11.081562118	0.090456807	-0.026153451			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ANTIMONY	5P3	Z=51 A=121 R=1.12162E-04 A.U.					
			3.967942647	0.016347245	-0.001985727		
			4.228836029	0.031036676	-0.004661356		
			4.043803302	0.015971985	-0.004753273		
			4.007464299	0.000630517	-0.000081424		
			3.950461359	0.000258487	-0.000082900		
			1.670315592	0.003385611	-0.000416180		
			1.630367086	0.005783441	-0.000869189		
			1.564158528	0.002950025	-0.000882404		
			1.303361684	0.000095564	-0.000012383		
			1.284221917	0.000038816	-0.000012525		
			0.572410252	0.000383940	-0.000047295		
			0.448564217	0.000410444	-0.000061692		
			0.422947114	0.000197746	-0.000059193		
2S1/2 -- (2)	305.646481	-643.187764	7.396094684	0.028764972		-0.023759748	0.000307566
			7.221904712	0.008874489	-0.000035272		
			7.044543018	0.015216189	-0.000127829		
			3.391734643	0.002980727	-0.000726886		
			3.611641889	0.004524121	-0.000715214		
			3.503955927	0.004316542	-0.000565108		
			3.778268955	0.003224819	-0.000448340		
			3.734893417	0.001443625	-0.000443685		
			1.556142489	0.000613036	-0.000156493		
			1.517932653	0.000875258	-0.000142345		
			1.466793978	0.000806481	-0.000114136		
			1.272993963	0.000386372	-0.000055918		
			1.255891392	0.000177093	-0.000055212		
			0.559552735	0.000069425	-0.000017841		
			0.440609759	0.000062398	-0.000010185		
			0.416441437	0.000054111	-0.000007735		
2P1/2 -- (2)	305.668816	-642.685921	8.835581828	0.064899318		-0.000892331	0.000018282
			8.200984552	0.010603091	-0.000002973		
			3.557910761	0.002056835	-0.000152339		
			3.597857874	0.004528461	-0.000674814		
			3.622130191	0.002012344	-0.000055572		
			3.767258794	0.009658660	-0.002296099		
			3.828703147	0.000323521	-0.000070352		
			1.587226665	0.000419485	-0.000033995		
			1.518074070	0.000816846	-0.000131751		
			1.487752180	0.000369360	-0.000011727		
			1.272220328	0.001202343	-0.000292105		
			1.267719929	0.000045297	-0.000009363		
			0.563020654	0.000047439	-0.000003900		
			0.440644307	0.000057700	-0.000009404		
			0.417838663	0.000024734	-0.000000800		
2P3/2 -- (4)	271.981873	-596.582441	8.114210982	0.038108682		-0.000103734	0.000004860
			3.532410204	0.002712379	-0.000168585		
			3.705875048	0.001657579	-0.000066045		
			3.526940068	0.003860358	-0.000335444		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ANTIMONY	5P3	Z=51 A=121 R=1.12162E-04 A.U.					
3D3/2			3.847957041	0.002847856	-0.000290019		
3D5/2			3.743669337	0.004869579	-0.001380429		
4S1/2			1.582115079	0.000539311	-0.000036650		
4P1/2			1.534732668	0.000302879	-0.000013814		
4P3/2			1.472047495	0.000687251	-0.000065230		
4D3/2			1.281887469	0.000357636	-0.000036734		
4D5/2			1.257464505	0.000595582	-0.000172668		
5S1/2			0.562443961	0.000060741	-0.000004189		
5P1/2			0.441794725	0.000021436	-0.000000996		
5P3/2			0.416801899	0.000045831	-0.000004400		
3S1/2 -- (2)	87.172332	-227.881279	2.715985686	0.001479777		-0.004635796	0.000059724
3P1/2			2.457836972	0.000568121	-0.000019381		
3P3/2			2.412696998	0.000842541	-0.000038110		
3D3/2			2.701483382	0.000510189	-0.000019790		
3D5/2			2.687008043	0.000669247	-0.000021067		
4S1/2			1.386804382	0.000190771	-0.000067181		
4P1/2			1.362873662	0.000190556	-0.000033448		
4P3/2			1.321418009	0.000216042	-0.000025124		
4D3/2			1.165977792	0.000070700	-0.000006144		
4D5/2			1.152579619	0.000081307	-0.000005743		
5S1/2			0.541263800	0.000021549	-0.000007828		
5P1/2			0.429848371	0.000014116	-0.000002545		
5P3/2			0.406907873	0.000014849	-0.000001823		
3P1/2 -- (2)	84.646879	-223.445435	2.803595969	0.002836001		-0.000188506	0.000003840
3P3/2			2.616102617	0.000469493	-0.000000347		
3D3/2			2.604483423	0.001091621	-0.000077608		
3D5/2			2.782328115	0.000491691	-0.000002929		
4S1/2			1.419525892	0.000179720	-0.000021990		
4P1/2			1.339137926	0.000243836	-0.000053903		
4P3/2			1.333693421	0.000105580	-0.000004953		
4D3/2			1.166856193	0.000170463	-0.000023360		
4D5/2			1.158435561	0.000055191	-0.000001665		
5S1/2			0.544502348	0.000019718	-0.000002537		
5P1/2			0.428421871	0.000017039	-0.000003937		
5P3/2			0.407673863	0.000007080	-0.000000363		
3P3/2 -- (4)	77.187389	-212.091048	2.615893728	0.001698979		-0.000022183	0.000001034
3D3/2			2.725921029	0.000399273	-0.000006857		
3D5/2			2.619234037	0.000950345	-0.000035442		
4S1/2			1.412164614	0.000232337	-0.000025408		
4P1/2			1.368083242	0.000096002	-0.000006057		
4P3/2			1.310056112	0.000206184	-0.000027047		
4D3/2			1.166361187	0.000055605	-0.000004483		
4D5/2			1.150497407	0.000139868	-0.000016179		
5S1/2			0.543708003	0.000025171	-0.000002872		
5P1/2			0.430175872	0.000006760	-0.000000465		
5P3/2			0.406239566	0.000013583	-0.000001875		
3D3/2 -- (4)	72.588806	-204.525908	2.892384251	0.002652938		-0.000000087	0.000000005
3D5/2			2.908091332	0.000501478	-0.000000003		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ANTIMONY	5P3	Z=51 A=121 R=1.12162E-04 A.U.					
4S1/2			1.438356102	0.000098755	-0.000002095		
4P1/2			1.377657876	0.000176066	-0.000010885		
4P3/2			1.345281356	0.000070908	-0.000001663		
4D3/2			1.163073436	0.000178956	-0.000013807		
4D5/2			1.169400795	0.000058294	-0.000000673		
5S1/2			0.546498077	0.000010882	-0.000000284		
5P1/2			0.430899761	0.000011866	-0.000000764		
5P3/2			0.408425056	0.000004673	-0.000000122		
3D5/2 -- (6)	70.795799	-201.603595	2.871000972	0.002316896		-0.000000020	0.000000002
4S1/2			1.435885717	0.000119333	-0.000002098		
4P1/2			1.385946550	0.000077179	-0.000000927		
4P3/2			1.338087921	0.000144518	-0.000005893		
4D3/2			1.181406555	0.000048268	-0.000000705		
4D5/2			1.154593855	0.000167694	-0.000009109		
5S1/2			0.546230477	0.000012941	-0.000000284		
5P1/2			0.431397052	0.000005321	-0.000000079		
5P3/2			0.407986565	0.000009273	-0.000000399		
4S1/2 -- (2)	23.853537	-90.465592	1.135428172	0.000098864		-0.000965235	0.000012423
4P1/2			0.980919495	0.000060604	-0.000005649		
4P3/2			0.963377621	0.000059826	-0.000008350		
4D3/2			0.939802624	0.000044633	-0.000004983		
4D5/2			0.932457495	0.000032899	-0.000005054		
5S1/2			0.505141279	0.000007558	-0.000003096		
5P1/2			0.410473396	0.000002944	-0.000000567		
5P3/2			0.389567482	0.000003372	-0.000000470		
4P1/2 -- (2)	21.321275	-84.614316	1.079903143	0.000161558		-0.000036336	0.000000739
4P3/2			1.005408084	0.000026645	-0.000000032		
4D3/2			0.864882249	0.000097385	-0.000018570		
4D5/2			0.932694235	0.000018444	-0.000000650		
5S1/2			0.508396143	0.000010612	-0.000001497		
5P1/2			0.404865174	0.000005557	-0.000001383		
5P3/2			0.389634918	0.000002264	-0.000000118		
4P3/2 -- (4)	19.437949	-80.864550	1.006272828	0.000096212		-0.000004240	0.000000197
4D3/2			0.918683969	0.000030645	-0.000001967		
4D5/2			0.874796344	0.000058359	-0.000009581		
5S1/2			0.506254829	0.000012576	-0.000001727		
5P1/2			0.409200767	0.000002284	-0.000000161		
5P3/2			0.386196895	0.000004420	-0.000000645		
4D3/2 -- (4)	13.782225	-66.493538	0.852844429	0.000083745		-0.000000014	0.000000001
4D5/2			0.856477141	0.000016075	-0.000000000		
5S1/2			0.494885917	0.000004116	-0.000000070		
5P1/2			0.399542133	0.000005871	-0.000000505		
5P3/2			0.383183698	0.000001720	-0.000000060		
4D5/2 -- (6)	13.377701	-65.514926	0.845408564	0.000072462		-0.000000003	0.000000000
5S1/2			0.493741486	0.000005341	-0.000000066		
5P1/2			0.402546343	0.000001922	-0.000000023		
5P3/2			0.381141685	0.000004098	-0.000000261		
5S1/2 -- (2)	3.379886	-29.791540	0.404957921	0.000003566		-0.000109565	0.000001410

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ANTIMONY 5P3 Z=51 A=121 R=1.12162E-04 A.U.							
5P1/2 -- (2)	1.989349	-22.980967	0.313506175	0.000003683	-0.000000526	-0.000002592	0.000000053
5P3/2 -- (1)	1.727046	-21.643638	0.303724614	0.000002278	-0.000000592	-0.000000286	0.000000013
ETOT	-6476.21766	6832.12804	0.313999495	0.000003306	-0.000000001	-0.000000286	0.000000013
			0.289214319	0.000000536	-0.000000000	-0.000000286	0.000000013
			0.000000000	0.000000000	-0.000000000	-0.000000286	0.000000013
			2419.44226	5.275449542	-0.541651638	-0.473470610	0.006349161
TELLURIUM 5P4 Z=52 A=130 R=1.14877E-04 A.U.							
1S1/2 -- (2)	1482.708911	-2886.905029	33.912562804	1.893330480	-0.010463243	-0.223728261	0.003167587
2S1/2			10.197601650	0.091774691	-0.028291078	-0.000014358	
2P1/2			12.072069301	0.189485820	-0.027839335	-0.000014561	
2P3/2			11.324389997	0.096284993	-0.002138978	-0.000056846	
3S1/2			4.074360934	0.017574322	-0.005004807	-0.000079243	
3P1/2			4.348809380	0.033417253	-0.005112556	-0.000088407	
3P3/2			4.151234718	0.017176669	-0.000280968	-0.000090122	
3D3/2			4.121340622	0.000685968	-0.000456882	-0.000956878	
3D5/2			4.060429118	0.000280968	-0.000090122	-0.000090122	
4S1/2			1.728796264	0.003708809	-0.000456882	-0.000956878	
4P1/2			1.695131697	0.006385024	-0.000974313	-0.000014358	
4P3/2			1.624553592	0.003256485	-0.000097431	-0.000014358	
4D3/2			1.379017716	0.000111017	-0.000014358	-0.000014358	
4D5/2			1.358897382	0.000045111	-0.000014561	-0.000014561	
5S1/2			0.613106722	0.000460445	-0.000056846	-0.000079243	
5P1/2			0.494496694	0.000528717	-0.000079243	-0.000079243	
5P3/2			0.466356861	0.000255622	-0.000079243	-0.000079243	
2S1/2 -- (2)	320.646417	-672.313988	7.568931258	0.030802396	-0.025998485	-0.000355443	
2P1/2			7.394407320	0.009496893	-0.000036448	-0.000139714	
2P3/2			7.205044467	0.016230494	-0.000139714	-0.000139714	
3S1/2			3.479231681	0.003217161	-0.000784972	-0.000784972	
3P1/2			3.709347370	0.004910400	-0.000776305	-0.000776305	
3P3/2			3.594838418	0.004646099	-0.000607945	-0.000607945	
3D3/2			3.883497366	0.003492081	-0.000485440	-0.000485440	
3D5/2			3.837264518	0.001562788	-0.000480371	-0.000480371	
4S1/2			1.608670042	0.000674146	-0.000172244	-0.000172244	
4P1/2			1.575691811	0.000974156	-0.000158463	-0.000158463	
4P3/2			1.521577911	0.000891235	-0.000126218	-0.000126218	
4D3/2			1.345467683	0.000444092	-0.000064335	-0.000064335	
4D5/2			1.327634867	0.000204000	-0.000063622	-0.000063622	
5S1/2			0.598301031	0.000083574	-0.000021501	-0.000021501	
5P1/2			0.484638808	0.000081050	-0.000013235	-0.000013235	
5P3/2			0.458301153	0.000070029	-0.000010025	-0.000010025	
2P1/2 -- (2)	320.675277	-671.819228	9.050117464	0.069526339	-0.001022539	-0.000022002	
2P3/2			8.390540794	0.011297221	-0.000003449	-0.000003449	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TELLURIUM	5P4	Z=52 A=130 R=1.14877E-04 A.U.					
3S1/2			3.651184681	0.002218004	-0.000164216		
3P1/2			3.695648103	0.004895568	-0.000730706		
3P3/2			3.717256234	0.002167391	-0.000059886		
3D3/2			3.872640837	0.010463993	-0.002487894		
3D5/2			3.934653454	0.000350186	-0.000076197		
4S1/2			1.641419724	0.000460922	-0.000037381		
4P1/2			1.575980416	0.000905142	-0.000146356		
4P3/2			1.543852093	0.000408353	-0.000012996		
4D3/2			1.344703824	0.001384518	-0.000336598		
4D5/2			1.340711812	0.000052350	-0.000010815		
5S1/2			0.602298271	0.000057059	-0.000004698		
5P1/2			0.484694866	0.000074580	-0.000012193		
5P3/2			0.460039462	0.000032020	-0.000003039		
2P3/2 -- (4)	283.936507	-621.614323	8.292530903	0.040614460		-0.000116721	0.000005724
3S1/2			3.623724004	0.002920292	-0.000182480		
3P1/2			3.805693404	0.001787526	-0.000071610		
3P3/2			3.617782787	0.004153356	-0.000362000		
3D3/2			3.955314919	0.003066152	-0.000313982		
3D5/2			3.845620777	0.005272432	-0.001494826		
4S1/2			1.635811720	0.000591263	-0.000040412		
4P1/2			1.593330649	0.000334627	-0.000015370		
4P3/2			1.527014453	0.000758470	-0.000072281		
4D3/2			1.355215293	0.000411776	-0.000042262		
4D5/2			1.329313437	0.000685812	-0.000198969		
5S1/2			0.601605763	0.000072876	-0.000005057		
5P1/2			0.486089883	0.000027644	-0.000001294		
5P3/2			0.458738923	0.000059209	-0.000005711		
3S1/2 -- (2)	92.101356	-238.907026	2.787087139	0.001603116		-0.0005114769	0.0000069588
3P1/2			2.524111273	0.000611715	-0.000020220		
3P3/2			2.476027944	0.000910412	-0.000041219		
3D3/2			2.775905708	0.000551016	-0.000020901		
3D5/2			2.760514753	0.000725319	-0.000022332		
4S1/2			1.431954487	0.000210887	-0.000074442		
4P1/2			1.412428889	0.000215008	-0.000037784		
4P3/2			1.368682683	0.000240580	-0.000028118		
4D3/2			1.228535499	0.000083095	-0.000007315		
4D5/2			1.214734085	0.000094280	-0.000006832		
5S1/2			0.577438133	0.000026071	-0.000009499		
5P1/2			0.471432126	0.000018607	-0.000003361		
5P3/2			0.446572621	0.000019384	-0.000002397		
3P1/2 -- (2)	89.529364	-234.424129	2.880915755	0.003078670		-0.000218252	0.000004668
3P3/2			2.686495681	0.000506142	-0.000000409		
3D3/2			2.678550050	0.001180348	-0.000082488		
3D5/2			2.860414147	0.000533989	-0.000003132		
4S1/2			1.466381317	0.000197732	-0.000024236		
4P1/2			1.387801902	0.000271736	-0.000060389		
4P3/2			1.381837717	0.000117115	-0.000005536		
4D3/2			1.229762104	0.000200761	-0.000027889		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TELLURIUM	5P4	Z=52 A=130 R=1.14877E-04 A.U.					
4D5/2			1.221338670	0.000063737	-0.000001964		
5S1/2			0.581154659	0.000023732	-0.000003065		
5P1/2			0.469723252	0.000022138	-0.000005150		
5P3/2			0.447531424	0.000009197	-0.000000478		
3P3/2 -- (4)	81.355117	-222.034415	2.684545621	0.001837331		-0.000025244	0.000001231
3D3/2			2.800987765	0.000430630	-0.000007120		
3D5/2			2.691201523	0.001027820	-0.000037040		
4S1/2			1.458412676	0.000256341	-0.000028160		
4P1/2			1.417874245	0.000106905	-0.000006806		
4P3/2			1.356774521	0.000229044	-0.000030248		
4D3/2			1.228953563	0.000065424	-0.000005351		
4D5/2			1.212471491	0.000163842	-0.000019398		
5S1/2			0.580214294	0.000030351	-0.000003483		
5P1/2			0.471829330	0.000008778	-0.000000612		
5P3/2			0.445758090	0.000017653	-0.000002458		
3D3/2 -- (4)	76.716791	-214.464870	2.976775822	0.002884846		-0.000000105	0.000000007
3D5/2			2.992315645	0.000545272	-0.000000004		
4S1/2			1.486373619	0.000108888	-0.000002340		
4P1/2			1.428608585	0.000195470	-0.000012140		
4P3/2			1.394305106	0.000078722	-0.000001859		
4D3/2			1.226001980	0.000206502	-0.000016198		
4D5/2			1.233579418	0.000067499	-0.000000793		
5S1/2			0.583468100	0.000013126	-0.000000349		
5P1/2			0.472771376	0.000015336	-0.000000995		
5P3/2			0.448475706	0.000006071	-0.000000160		
3D5/2 -- (6)	74.753232	-211.280658	2.953474669	0.002516902		-0.000000024	0.000000002
4S1/2			1.483704092	0.000131430	-0.000002344		
4P1/2			1.437156304	0.000085749	-0.000001047		
4P3/2			1.386696176	0.000160130	-0.000006545		
4D3/2			1.245788522	0.000055756	-0.000000832		
4D5/2			1.217434325	0.000193454	-0.000010693		
5S1/2			0.583151656	0.000015585	-0.000000349		
5P1/2			0.473364103	0.000006889	-0.000000105		
5P3/2			0.447934285	0.000012009	-0.000000521		
4S1/2 -- (2)	25.670128	-95.598841	1.173903112	0.000109976		-0.001085367	0.000014752
4P1/2			1.016315920	0.000066254	-0.000006038		
4P3/2			0.997792599	0.000066551	-0.000009165		
4D3/2			0.985185691	0.000030282	-0.000005526		
4D5/2			0.977746445	0.000037965	-0.000005625		
5S1/2			0.536967408	0.000009259	-0.000003833		
5P1/2			0.448121457	0.000003964	-0.000000773		
5P3/2			0.425662269	0.000004494	-0.000000631		
4P1/2 -- (2)	23.101161	-89.749246	1.121098957	0.000181638		-0.000043171	0.000000922
4P3/2			1.043366505	0.000029727	-0.000000040		
4D3/2			0.907500782	0.000109650	-0.000020591		
4D5/2			0.979495478	0.000021628	-0.000000728		
5S1/2			0.540833755	0.000012853	-0.000001826		
5P1/2			0.441583095	0.000007322	-0.000001865		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TELLURIUM 5P4 Z=52 A=130 R=1.14877E-04 A.U.							
4P3/2 -- (4)	21.013547	-85.658409	0.425823902	0.000002982	-0.000000161		
4D3/2 -- (4)	15.406800	-71.734130	1.043914816	0.000107917	-0.000004956	0.000000241	
4D5/2			0.963935292	0.000034489	-0.000002147		
5S1/2			0.917882696	0.000066363	-0.000010503		
5P1/2			0.538407865	0.000015329	-0.000002121		
5P3/2			0.446653653	0.000003017	-0.000000219		
5P3/2			0.421709832	0.000005824	-0.000000873		
5P3/2			0.903105516	0.000099290	-0.000000017	0.000000001	
5P3/2			0.907078268	0.000019109	-0.000000000		
5S1/2			0.527835318	0.000005145	-0.000000103		
5P1/2			0.436646619	0.000007828	-0.000000705		
5P3/2			0.419036765	0.000002304	-0.000000085		
4D5/2 -- (6)	14.958761	-70.684967	0.895486010	0.000089978	-0.000000004	0.000000000	
5S1/2			0.526641745	0.000006562	-0.000000098		
5P1/2			0.439823558	0.000002528	-0.000000033		
5P3/2			0.416825107	0.000005428	-0.000000364		
5S1/2 -- (2)	3.975948	-32.589270	0.432382050	0.000004413	-0.000134885	0.000001833	
5P1/2			0.340120212	0.000004572	-0.000000646		
5P3/2			0.329806574	0.000002909	-0.000000748		
5P1/2 -- (2)	2.494481	-25.846768	0.345231508	0.000004435	-0.000003594	0.000000077	
5P3/2			0.317940083	0.000000715	-0.000000001		
5P3/2 -- (2)	2.168273	-24.343453	0.314938162	0.000002487	-0.000000391	0.000000019	
ETOT	-6789.11174	7178.13764	-16498.81229	2527.00791	5.644144643	-0.581164685	0.007302612
IODINE 5P5 Z=53 A=127 R=1.13987E-04 A.U.							
1S1/2 -- (2)	1548.267514	-3009.289194	34.653346197	2.009554711	-0.242840042	0.003624799	
2S1/2			10.435155011	0.097793776	-0.011169183		
2P1/2			12.364573743	0.202037889	-0.030085400		
2P3/2			11.567774196	0.102357547	-0.029595902		
3S1/2			4.181600619	0.018866228	-0.002300689		
3P1/2			4.469792939	0.035923026	-0.005364571		
3P3/2			4.259037509	0.018442388	-0.005490089		
3D3/2			4.235438082	0.000744521	-0.000095755		
3D5/2			4.170432133	0.000304675	-0.000097737		
4S1/2			1.787843826	0.004053819	-0.000500437		
4P1/2			1.760435973	0.007028290	-0.001050203		
4P3/2			1.685248849	0.003584056	-0.001072575		
4D3/2			1.452905950	0.000127683	-0.000016481		
4D5/2			1.431660366	0.000051892	-0.000016754		
5S1/2			0.652751723	0.000543134	-0.000067203		
5P1/2			0.537932796	0.000657356	-0.000098235		
5P3/2			0.506910045	0.000318044	-0.000095259		
2S1/2 -- (2)	336.146730	-702.274117	7.743010038	0.032946272	-0.028415190	0.000409315	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
IODINE 5P5 Z=53 A=127 R=1.13987E-04 A.U.							
2P1/2			7.568273523	0.010151597	-0.000037648		
2P3/2			7.366299883	0.017290473	-0.000152725		
3S1/2			3.567289501	0.003467283	-0.000846412		
3P1/2			3.807697837	0.005320502	-0.000841129		
3P3/2			3.686038084	0.004991810	-0.000652728		
3D3/2			3.988941610	0.003773936	-0.000524552		
3D5/2			3.939716789	0.001688318	-0.000519041		
4S1/2			1.661624008	0.000739690	-0.000189141		
4P1/2			1.633808900	0.001080871	-0.000175852		
4P3/2			1.576572646	0.000981792	-0.000139114		
4D3/2			1.416164156	0.000505673	-0.000073325		
4D5/2			1.397474443	0.000232726	-0.000072607		
5S1/2			0.635967415	0.000098954	-0.000025485		
5P1/2			0.526129957	0.000101596	-0.000016596		
5P3/2			0.497300984	0.000087216	-0.000012499		
2P1/2 -- (2)	336.175544	-701.779078	9.266423521	0.074395733		-0.001169386	0.000026376
2P3/2			8.581018701	0.012020861	-0.000003991		
3S1/2			3.745109604	0.002388419	-0.000176759		
3P1/2			3.794093805	0.005284283	-0.000789904		
3P3/2			3.812744735	0.002330478	-0.000064419		
3D3/2			3.978263037	0.011313220	-0.002690166		
3D5/2			4.040680742	0.000378210	-0.000082355		
4S1/2			1.696081638	0.000505342	-0.000041010		
4P1/2			1.634255632	0.001000087	-0.000162083		
4P3/2			1.600193461	0.000450092	-0.000014356		
4D3/2			1.415423692	0.001579270	-0.000384203		
4D5/2			1.411801126	0.000059899	-0.000012369		
5S1/2			0.640503238	0.000067505	-0.000005565		
5P1/2			0.526212280	0.000093049	-0.000015257		
5P3/2			0.499384208	0.000039895	-0.000001299		
2P3/2 -- (4)	296.170139	-647.185051	8.471139993	0.043228858		-0.000131027	0.000006717
3S1/2			3.715574919	0.003139582	-0.000197253		
3P1/2			3.906485525	0.001924575	-0.000077526		
3P3/2			3.708854699	0.004461202	-0.000389973		
3D3/2			4.062826519	0.003337491	-0.000339217		
3D5/2			3.947977427	0.005696844	-0.001615358		
4S1/2			1.689941342	0.000646772	-0.000044463		
4P1/2			1.652279416	0.000369049	-0.000017059		
4P3/2			1.582174638	0.000834548	-0.000079841		
4D3/2			1.426750561	0.000469613	-0.000048161		
4D5/2			1.399241883	0.000782051	-0.000227047		
5S1/2			0.639685100	0.000086001	-0.000006006		
5P1/2			0.527845584	0.000034410	-0.000001623		
5P3/2			0.497812088	0.000073622	-0.000007134		
3S1/2 -- (2)	97.209957	-250.254039	2.858620481	0.001733973		-0.005635071	0.000080769
3P1/2			2.590802408	0.000657785	-0.000021073		
3P3/2			2.539631524	0.000982026	-0.000044576		
3D3/2			2.850601110	0.000594169	-0.000022063		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-V-P)
IODINE 5P5 Z=53 A=127 R=1.13987E-04 A.U.							
3D5/2			2.834249423	0.000784580	-0.000023664		
4S1/2			1.477417697	0.000232553	-0.000082269		
4P1/2			1.462219673	0.000241698	-0.000042516		
4P3/2			1.416070718	0.000266914	-0.000031339		
4D3/2			1.289432143	0.000096632	-0.000008606		
4D5/2			1.275127382	0.000108241	-0.000008031		
5S1/2			0.612531081	0.000031017	-0.000011331		
5P1/2			0.510467492	0.000023650	-0.000004280		
5P3/2			0.483396793	0.000024335	-0.000003029		
3P1/2 -- (2)	94.589088	-245.721281	2.958712512	0.003336342		-0.000252084	0.000005651
3P3/2			2.757193686	0.000544605	-0.000000482		
3D3/2			2.752889554	0.001274260	-0.000087647		
3D5/2			2.938749169	0.000578719	-0.000003347		
4S1/2			1.513583893	0.000217052	-0.000026647		
4P1/2			1.436701305	0.000301881	-0.000067418		
4P3/2			1.430128108	0.000129476	-0.000006165		
4D3/2			1.291036020	0.000233858	-0.000032884		
4D5/2			1.282499898	0.000072901	-0.000002290		
5S1/2			0.616730119	0.000028094	-0.000003640		
5P1/2			0.508487652	0.000027757	-0.000006498		
5P3/2			0.484552331	0.000011496	-0.000000604		
3P3/2 -- (4)	85.645373	-232.220773	2.753367201	0.001983332		-0.000028649	0.000001460
3D3/2			2.876185981	0.000463654	-0.000007385		
3D5/2			2.763260497	0.001109517	-0.000038677		
4S1/2			1.504970337	0.000282170	-0.000031139		
4P1/2			1.467882651	0.000118673	-0.000007622		
4P3/2			1.403594091	0.000253621	-0.000033706		
4D3/2			1.289870212	0.000076180	-0.000006313		
4D5/2			1.272672024	0.000189910	-0.000022967		
5S1/2			0.615634267	0.000035995	-0.000004154		
5P1/2			0.510931497	0.000011000	-0.000000776		
5P3/2			0.482438142	0.000022078	-0.000003099		
3D3/2 -- (4)	80.966112	-224.643661	3.061281333	0.003130104		-0.000000125	0.000000008
3D5/2			3.076600515	0.000591541	-0.000000004		
4S1/2			1.534728441	0.000119758	-0.000002605		
4P1/2			1.479805854	0.000216348	-0.000013497		
4P3/2			1.443466562	0.000087112	-0.000002070		
4D3/2			1.287322893	0.000236037	-0.000018803		
4D5/2			1.296011069	0.000077385	-0.000000925		
5S1/2			0.619363966	0.000015569	-0.000000421		
5P1/2			0.512108042	0.000019132	-0.000001250		
5P3/2			0.485691984	0.000007590	-0.000000203		
3D5/2 -- (6)	78.819824	-221.179750	3.035954337	0.002728076		-0.000000028	0.000000003
4S1/2			1.531847403	0.000144394	-0.000002610		
4P1/2			1.488604387	0.000094965	-0.000001177		
4P3/2			1.435428195	0.000176863	-0.000007246		
4D3/2			1.308514769	0.000063789	-0.000000970		
4D5/2			1.278542221	0.000221008	-0.000012417		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
IODINE								
5P5	Z=53	A=127	R=1.13987E-04	A.U.				
4S1/2 -- (2)	27.574892	-100.902423	0.618995544 0.512790767 0.485047190 1.212665015 1.051931320 1.032371043 1.029516110 1.021910767 0.567832916 0.483330427 0.459065653	0.000018458 0.000008607 0.000014967 0.000122014 0.000072267 0.000073821 0.000056236 0.000043426 0.000011150 0.000005150 0.000005756	-0.000000421 -0.000000134 -0.000000653	-0.001217735	0.000017436	
4P1/2 -- (2)	24.968516	-95.050980	1.162498228 1.081466346 0.949302867 1.025227493 0.572326284 0.475934746 0.459343370	0.000203482 0.000033037 0.000122637 0.000025094 0.000015308 0.000009305 0.000003774	-0.000000814	-0.000051099	0.000001144	
4P3/2 -- (4)	22.659186	-90.592861	1.081644711 1.008180189 0.959993676 0.569609776 0.481687110 0.454580179	0.000120598 0.000038535 0.000074900 0.000018377 0.000003844 0.000007381	-0.000000210	-0.000005770	0.000000294	
4D3/2 -- (4)	17.083322	-77.032506	0.951906884 0.956152429 0.559805196 0.471476002 0.452344471	0.000116217 0.000022409 0.000006292 0.000010025 0.000002955	-0.0000001133	-0.000000022	0.000000001	
4D5/2 -- (6)	16.587189	-75.903117	0.944002714 0.558551338 0.474804061 0.449974117 0.458935682	0.000100675 0.000007913 0.000003209 0.000006899 0.000005360	-0.000000112	-0.000000005	0.000000000	
5S1/2 -- (2)	4.603488	-35.419266	0.365190199 0.354188883	0.000005517 0.000003603	-0.000000771 -0.000000913	-0.000163331	0.000002338	
5P1/2 -- (2)	3.026655	-28.674256	0.374326469 0.344571196	0.000005714 0.000000913	-0.000000001	-0.000004807	0.000000108	
5P3/2 -- (3)	2.626973	-26.979533	0.341288647	0.000003198	-0.000000001	-0.000000515	0.000000026	
ETOT	-7110.89895	7535.54429	-17288.86448	2637.56458	6.031154241	-0.622714324	-0.560161609	0.008369889

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON 5P6 Z=54 A=132 R=1.15463E-04 A.U.							
1S1/2 -- (2)	1615.728779	-3134.846078	35.399393480	2.130671506		-0.263248926	0.004134388
2S1/2			10.674675717	0.104091604	-0.011909522		
2P1/2			12.660038500	0.215172534	-0.031954242		
2P3/2			11.811738259	0.108679946	-0.031424706		
3S1/2			4.289641185	0.020224489	-0.002471118		
3P1/2			4.591778750	0.038557174	-0.005740849		
3P3/2			4.367181742	0.019770447	-0.005886237		
3D3/2			4.349698436	0.000806207	-0.000103467		
3D5/2			4.280408375	0.000329617	-0.000105749		
4S1/2			1.847399901	0.004421181	-0.000546933		
4P1/2			1.826222634	0.007714206	-0.001149228		
4P3/2			1.746173663	0.003933161	-0.001177316		
4D3/2			1.525425617	0.000145610	-0.000018756		
4D5/2			1.502930549	0.000059177	-0.000019112		
5S1/2			0.691353056	0.000631734	-0.000078337		
5P1/2			0.579524829	0.000796237	-0.000118632		
5P3/2			0.545480980	0.000385192	-0.000115403		
2S1/2 -- (2)	352.157611	-733.081046	7.918342746	0.035200379		-0.031016800	0.000469789
2P1/2			7.743539937	0.010839803	-0.000038865		
2P3/2			7.528321613	0.018397365	-0.000166950		
3S1/2			3.655891871	0.003731549	-0.000911324		
3P1/2			3.906685686	0.005755359	-0.000909824		
3P3/2			3.777535667	0.005353917	-0.000699465		
3D3/2			4.094557665	0.004070632	-0.000565705		
3D5/2			4.042202803	0.001820296	-0.000559727		
4S1/2			1.714954340	0.000809820	-0.000207228		
4P1/2			1.692235986	0.001195702	-0.000194555		
4P3/2			1.631720867	0.001078249	-0.000152828		
4D3/2			1.485480459	0.000571290	-0.000082911		
4D5/2			1.465827847	0.000263352	-0.000082194		
5S1/2			0.672574682	0.000115530	-0.000029784		
5P1/2			0.565744382	0.000124053	-0.000020270		
5P3/2			0.534314551	0.000105717	-0.000015165		
2P1/2 -- (2)	352.184817	-732.584698	9.484574393	0.079517454		-0.001334632	0.000031504
2P3/2			8.772455707	0.012774672	-0.000004606		
3S1/2			3.839672438	0.002568389	-0.000189983		
3P1/2			3.893188566	0.005695433	-0.000852534		
3P3/2			3.908577983	0.002501793	-0.000069173		
3D3/2			4.084084154	0.012206985	-0.002903057		
3D5/2			4.146732953	0.000407594	-0.000088829		
4S1/2			1.751161082	0.000552850	-0.000044889		
4P1/2			1.692851851	0.001101921	-0.000178973		
4P3/2			1.656717001	0.000494641	-0.000015809		
4D3/2			1.484776766	0.001787156	-0.000435053		
4D5/2			1.481406787	0.000067960	-0.000014031		
5S1/2			0.677654445	0.000078753	-0.000006500		
5P1/2			0.565857536	0.000113112	-0.000018597		
5P3/2			0.536746732	0.000048385	-0.000001580		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON 5P6 Z=54 A=132 R=1.15463E-04 A.U.							
2P3/2 -- (4)	308.679363	-673.297870	8.650056007	0.045954462		-0.000146758	0.000007855
3S1/2			3.807945314	0.003370602	-0.000212940		
3P1/2			4.007640534	0.002068940	-0.000083788		
3P3/2			3.800134464	0.004784235	-0.000419400		
3D3/2			4.170442886	0.003602071	-0.000365740		
3D5/2			4.050090493	0.006143085	-0.001742102		
4S1/2			1.744451278	0.000705944	-0.000048813		
4P1/2			1.711527918	0.000405606	-0.000018871		
4P3/2			1.637468821	0.000915580	-0.000087923		
4D3/2			1.496890399	0.000531300	-0.000054442		
4D5/2			1.467666780	0.000884551	-0.000256976		
5S1/2			0.676701160	0.000100075	-0.000007033		
5P1/2			0.567721173	0.000041729	-0.000001983		
5P3/2			0.534894698	0.000089109	-0.000008673		
3S1/2 -- (2)	102.500049	-261.924794	2.930571513	0.001872609		-0.006198557	0.000093409
3P1/2			2.657900557	0.000706415	-0.000021942		
3P3/2			2.603493046	0.001057481	-0.000048200		
3D3/2			2.925545876	0.000639721	-0.000023282		
3D5/2			2.908186888	0.000847104	-0.000025069		
4S1/2			1.523155386	0.000255827	-0.000090685		
4P1/2			1.512210795	0.000270735	-0.000047664		
4P3/2			1.463540195	0.000295070	-0.000034793		
4D3/2			1.349040155	0.000111360	-0.000010023		
4D5/2			1.334151744	0.000123237	-0.000009343		
5S1/2			0.646584578	0.000036379	-0.000013323		
5P1/2			0.547626425	0.000029262	-0.000005303		
5P3/2			0.518250765	0.000029718	-0.000003721		
3P1/2 -- (2)	99.828804	-257.340507	3.036978436	0.003609579		-0.000290461	0.000006813
3P3/2			2.828183482	0.000584904	-0.000000565		
3D3/2			2.827477652	0.001373541	-0.000093110		
3D5/2			3.017309472	0.000625935	-0.000003577		
4S1/2			1.561093383	0.000237722	-0.000029228		
4P1/2			1.485802452	0.000334359	-0.000075013		
4P3/2			1.478521548	0.000142678	-0.000006841		
4D3/2			1.351048312	0.000269859	-0.000038364		
4D5/2			1.342311336	0.000082712	-0.000002645		
5S1/2			0.651267201	0.000032795	-0.000004263		
5P1/2			0.545387447	0.000033903	-0.000007983		
5P3/2			0.519606999	0.000013983	-0.000000742		
3P3/2 -- (4)	90.057750	-242.649564	2.822340962	0.002137173		-0.000032429	0.000001725
3D3/2			2.951489187	0.000498388	-0.000007652		
3D5/2			2.835382505	0.001195525	-0.000040358		
4S1/2			1.551796149	0.000309897	-0.000034355		
4P1/2			1.518071000	0.000131335	-0.000008507		
4P3/2			1.450472535	0.000279958	-0.000037430		
4D3/2			1.349481003	0.000087918	-0.000007372		
4D5/2			1.331487856	0.000218165	-0.000026903		
5S1/2			0.650006911	0.000042092	-0.000004886		

TABLE 1.—CONTINUED

LEVEL	(ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON 5P6 Z=54 A=132 R=1.15463E-04 A.U.								
3D3/2 --	5P1/2	85.334947	-235.059795	0.548153401	0.000013428	-0.000000958	-0.000000150	0.000000010
	5P3/2			0.517149030	0.000026873	-0.000003800		
	(4)			3.145857432	0.003388955			
	3D5/2			3.160900896	0.000640319	-0.000000005		
	4S1/2			1.5833375163	0.000131388	-0.000002891		
	4P1/2			1.531208451	0.000238752	-0.000014962		
	4P3/2			1.492717055	0.000096094	-0.000002297		
	4D3/2			1.347396479	0.000267649	-0.000021632		
	4D5/2			1.357082819	0.000087981	-0.000001069		
	5S1/2			0.654220084	0.000018205	-0.000000500		
3D5/2 --	5P1/2	82.993214	-231.297617	0.549578314	0.000023254	-0.000001531	-0.000000034	0.000000003
	5P3/2			0.520942878	0.000009235	-0.000000250		
	(6)			3.118394247	0.002950582			
	4S1/2			1.580269888	0.000158250	-0.0000002897		
	4P1/2			1.540248354	0.000104845	-0.000001319		
	4P3/2			1.484235568	0.000194743	-0.000007998		
	4D3/2			1.369951556	0.000072392	-0.000001120		
	4D5/2			1.338299243	0.000250433	-0.000014287		
	5S1/2			0.653796735	0.000021551	-0.000000501		
	5P1/2			0.550345278	0.000010474	-0.000000167		
4S1/2 --	5P3/2	29.567829	-106.375176	0.520193896	0.000018158	-0.000000797	-0.001363032	0.000020518
	(2)			1.251674542	0.000135016			
	4P1/2			1.087734512	0.000078653	-0.0000006850		
	4P3/2			1.067079353	0.000081653	-0.000010993		
	4D3/2			1.073064780	0.000062524	-0.000006659		
	4D5/2			1.065237921	0.000049304	-0.000006824		
	5S1/2			0.597800789	0.000013228	-0.000005573		
	5P1/2			0.516775996	0.000006515	-0.000001294		
	5P3/2			0.490626332	0.000007165	-0.000001020		
	(2)			1.204067406	0.000227163			
4P1/2 --	4P3/2	26.923250	-100.518303	1.119673174	0.000036579	-0.000000059	-0.000060257	0.000001412
	4D3/2			0.990502203	0.000136409	-0.000024866		
	4D5/2			1.070161654	0.000028854	-0.000000892		
	5S1/2			0.602930307	0.000017973	-0.000002584		
	5P1/2			0.508587123	0.000011513	-0.000003047		
	5P3/2			0.491038988	0.000004644	-0.000000265		
	(4)			1.119425126	0.000134284			
	4D3/2			1.051661114	0.000042797	-0.0000002507		
	4D5/2			1.001365848	0.000084005	-0.000012374		
	5S1/2			0.599917469	0.000021719	-0.000003044		
4P3/2 --	5P1/2	24.373549	-95.664907	0.514973005	0.000004767	-0.000000362	-0.000006690	0.000000355
	5P3/2			0.485645878	0.000009100	-0.000001426		
	(4)			0.999594727	0.000134595			
	4D5/2			1.004059853	0.000025987	-0.000000000		
	5S1/2			0.590866708	0.000007554	-0.000000186		
	5P1/2			0.504662379	0.000012463	-0.000001193		
	5P3/2			0.483911936	0.000003673	-0.000000144		
	(6)			0.991324894	0.000116609			
	4D5/2			1.004059853	0.000025987	-0.000000000		
	5S1/2			0.590866708	0.000007554	-0.000000186		
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
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5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.000000144					
4D5/2	1.004059853	0.000025987	-0.000000000					
5S1/2	0.590866708	0.000007554	-0.000000186					
5P1/2	0.504662379	0.000012463	-0.000001193					
5P3/2	0.483911936	0.000003673	-0.00000					

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
XENON	5P6	Z=54 A=132 R=1.15463E-04 A.U.					
5S1/2 -- (2)	5.258024	-38.278232	0.589544546	0.000009392	-0.000000180		
5P1/2			0.508127210	0.000003965	-0.000000060		
5P3/2			0.481387348	0.000008516	-0.000000608		
5P1/2 -- (2)			0.484658172	0.000006405		-0.000194987	0.000002935
5P1/2			0.389113977	0.000006518	-0.000000900		
5P3/2			0.377365833	0.000004359	-0.000001092		
5P1/2 -- (2)	3.583078	-31.491131	0.401928539	0.000007150		-0.000006258	0.000000147
5P3/2			0.369771254	0.000001131	-0.000000002		
5P3/2 -- (4)	3.102554	-29.590531	0.366146326	0.000003990		-0.000006659	0.000000035
ETOT	-7441.67660	7904.46749	-18102.45382	2751.13773	6.436968990	-0.666358242	-0.608174911
							0.009561783
CESIUM	6S1	Z=55 A=134 R=1.16043E-04 A.U.					
1S1/2 -- (2)	1685.164190	-3263.665169	36.151028758	2.256835295		-0.285055428	0.004701214
2S1/2			10.916268789	0.110678383	-0.012685574		
2P1/2			12.958598359	0.228908634	-0.033899296		
2P3/2			12.056324948	0.115257727	-0.033327357		
3S1/2			4.398553994	0.021651977	-0.002650659		
3P1/2			4.714854497	0.041324714	-0.006134097		
3P3/2			4.475730841	0.021163131	-0.006301663		
3D3/2			4.464215297	0.000871140	-0.000111556		
3D5/2			4.390446611	0.000355837	-0.000114172		
4S1/2			1.907595164	0.004812517	-0.000596588		
4P1/2			1.892702666	0.008446146	-0.001254368		
4P3/2			1.807561054	0.004305680	-0.001289098		
4D3/2			1.597698755	0.000165021	-0.000021211		
4D5/2			1.573896299	0.000067061	-0.000021664		
5S1/2			0.739126660	0.000749807	-0.000093183		
5P1/2			0.641705336	0.001023052	-0.000151952		
5P3/2			0.608223404	0.000504269	-0.000151120		
6S1/2			0.212923910	0.000049555	-0.000006160		
2S1/2 -- (2)	368.698255	-764.758911	8.094999112	0.037569492		-0.033819065	0.000537539
2P1/2			7.920277189	0.011562925	-0.000040101		
2P3/2			7.691153599	0.019552542	-0.000182506		
3S1/2			3.745089961	0.004010655	-0.000979869		
3P1/2			4.006372645	0.006216199	-0.000982575		
3P3/2			3.869382199	0.005732912	-0.000748189		
3D3/2			4.200431622	0.004382788	-0.000608984		
3D5/2			4.144805272	0.001958977	-0.000602509		
4S1/2			1.768771303	0.000884885	-0.000226592		
4P1/2			1.751152907	0.001319333	-0.000214681		
4P3/2			1.687227907	0.001181097	-0.000167424		
4D3/2			1.554493032	0.000641766	-0.000093215		
4D5/2			1.533888029	0.000296285	-0.000092511		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CESIUM	6S1	Z=55 A=134 R=1.16043E-04 A.U.					
	5S1/2		0.717670442	0.000137640	-0.000035517		
	5P1/2		0.624623467	0.000160662	-0.000026258		
	5P3/2		0.594186649	0.000138493	-0.000019883		
	6S1/2		0.211507247	0.000009095	-0.000002349		
2P1/2 -- (2)	368.719519	-764.256789	9.704656363	0.084901970		-0.001520402	0.000037502
	2P3/2		8.964899142	0.013559327	-0.000005301		
	3S1/2		3.934929964	0.002758380	-0.000203921		
	3P1/2		3.992993824	0.006130110	-0.000918752		
	3P3/2		4.004810226	0.002681640	-0.000074156		
	3D3/2		4.190189529	0.013147080	-0.003126999		
	3D5/2		4.252895196	0.000438383	-0.000095631		
	4S1/2		1.806773918	0.000603681	-0.000049037		
	4P1/2		1.751949214	0.001211228	-0.000197123		
	4P3/2		1.713634426	0.000542243	-0.000017362		
	4D3/2		1.553838498	0.002010781	-0.000489787		
	4D5/2		1.550690902	0.000076637	-0.000015821		
	5S1/2		0.723480316	0.000093757	-0.000007746		
	5P1/2		0.624784439	0.000145863	-0.000024046		
	5P3/2		0.597258226	0.000063427	-0.000002078		
	6S1/2		0.211890333	0.000006194	-0.000000513		
2P3/2 -- (4)	321.469158	-699.956492	8.829306736	0.048794059		-0.000164026	0.000009157
	3S1/2		3.900885829	0.003613882	-0.000229592		
	3P1/2		4.109416619	0.002220935	-0.000090419		
	3P3/2		3.891669571	0.005122998	-0.000450335		
	3D3/2		4.278249189	0.003880428	-0.000393598		
	3D5/2		4.152239621	0.006612012	-0.001875303		
	4S1/2		1.799454418	0.000769046	-0.000053487		
	4P1/2		1.771257843	0.000444688	-0.000020821		
	4P3/2		1.693102102	0.001001992	-0.000096572		
	4D3/2		1.566723140	0.000597598	-0.000061183		
	4D5/2		1.535732066	0.000994656	-0.000289149		
	5S1/2		0.722346624	0.000118831	-0.000008405		
	5P1/2		0.627040052	0.000053678	-0.000002570		
	5P3/2		0.594897632	0.000116574	-0.000011396		
	6S1/2		0.211815461	0.000007846	-0.000000556		
3S1/2 -- (2)	107.979283	-273.929172	3.002983168	0.002019429		-0.006809097	0.000107668
	3P1/2		2.725447545	0.000757732	-0.000022825		
	3P3/2		2.667649528	0.001136937	-0.000052114		
	3D3/2		3.000796837	0.000687783	-0.000024560		
	3D5/2		2.982382933	0.000913038	-0.000026550		
	4S1/2		1.569253310	0.000280834	-0.000099735		
	4P1/2		1.562545778	0.000302325	-0.000053264		
	4P3/2		1.511256475	0.000325192	-0.000038496		
	4D3/2		1.408273341	0.000127470	-0.000011585		
	4D5/2		1.392780516	0.000139468	-0.000010786		
	5S1/2		0.688231732	0.000043532	-0.000015980		
	5P1/2		0.602370436	0.000038384	-0.000006965		
	5P3/2		0.574108281	0.000039208	-0.000004939		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CESIUM	6S1	Z=55	A=134	R=1.16043E-04	A.U.		
3P1/2 -- (2)	105.255550	-269.291038	0.209573395	0.000002875	-0.000001059	-0.000333944	0.000008183
3P3/2			3.115763684	0.003899179			
3D3/2			2.899507351	0.000627093	-0.000000660		
3D5/2			2.902371142	0.001478448	-0.000098897		
4S1/2			3.096154523	0.000675745	-0.000003822		
4P1/2			1.609000399	0.000259846	-0.000031993		
4P3/2			1.535243905	0.000369370	-0.000083222		
4D3/2			1.527186828	0.000156790	-0.000007569		
4D5/2			1.410713727	0.000309214	-0.000044395		
5S1/2			1.401755394	0.000093307	-0.000003034		
5P1/2			0.693562979	0.000039060	-0.000005093		
5P3/2			0.599683116	0.000043917	-0.000010400		
6S1/2			0.575828587	0.000018379	-0.000000985		
3P3/2 -- (4)	94.595735	-253.325457	0.209919759	0.000002570	-0.000000337	-0.000036617	0.000002031
3D3/2			2.891505900	0.002299179			
3D5/2			3.026952401	0.000534900	-0.000007920		
4S1/2			2.907620502	0.001286018	-0.000042083		
4P1/2			1.598978042	0.000339671	-0.000037828		
4P3/2			1.568582121	0.000144968	-0.000009466		
4D3/2			1.497570978	0.000308211	-0.000041444		
4D5/2			1.408697755	0.000100799	-0.000008543		
5S1/2			1.389886369	0.000248993	-0.000031262		
5P1/2			0.692083107	0.000050219	-0.000005862		
5P3/2			0.603003335	0.000017383	-0.000001254		
6S1/2			0.572737147	0.000035345	-0.000005037		
3D3/2 -- (4)	89.827196	-245.718920	0.209822511	0.000003299	-0.000000387	-0.000000178	0.000000013
3D5/2			3.230578877	0.003662000			
4S1/2			3.245291289	0.000691714	-0.000000006		
4P1/2			1.632407502	0.000143836	-0.000003200		
4P3/2			1.582963128	0.000262809	-0.000016546		
4D3/2			1.542228198	0.000105718	-0.000002542		
4D5/2			1.407129092	0.000301734	-0.000024720		
5S1/2			1.417792442	0.000099429	-0.000001227		
5P1/2			0.696936840	0.000021716	-0.000000606		
5P3/2			0.604827586	0.000029973	-0.000001988		
6S1/2			0.577517567	0.000012143	-0.000000332		
3D5/2 -- (6)	87.276676	-241.639063	0.210140693	0.000001430	-0.000000041	-0.000000040	0.000000004
4S1/2			3.200867272	0.003184895			
4P1/2			1.629064490	0.000173061	-0.000003207		
4P3/2			1.592235954	0.000115442	-0.000001473		
4D3/2			1.533287701	0.000213868	-0.000008805		
4D5/2			1.431032155	0.000081672	-0.000001286		
5S1/2			1.397678443	0.000282116	-0.000016327		
5P1/2			0.696440110	0.000025669	-0.000000607		
5P3/2			0.605741223	0.000013517	-0.000000221		
6S1/2			0.576576175	0.000023801	-0.000001052		
4S1/2 -- (2)	31.655885	-112.027820	0.210108028	0.000001687	-0.000000041	-0.001522653	0.000024050
			1.291018178	0.000149066			

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)		E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CESIUM	6S1	Z=55 A=134 R=1.16043E-04 A.U.						
	4P1/2			1.123828147	0.000085442	-0.000007272		
	4P3/2			1.102031715	0.000090102	-0.000012016		
	4D3/2			1.116438572	0.000069219	-0.000007256		
	4D5/2			1.108375847	0.000055678	-0.000007461		
	5S1/2			0.633849809	0.000016008	-0.000006801		
	5P1/2			0.565131694	0.000008753	-0.000001752		
	5P3/2			0.540182967	0.000009643	-0.000001384		
	6S1/2			0.206111900	0.000001059	-0.000000461		
4P1/2 -- (2)	28.973470	-106.165121		1.245950841	0.000252861		-0.000070825	0.000001733
	4P3/2			1.158133629	0.000040373	-0.000000072		
	4D3/2			1.031638817	0.000151128	-0.000027153		
	4D5/2			1.114958753	0.000032961	-0.000000982		
	5S1/2			0.639791164	0.000021516	-0.000003113		
	5P1/2			0.555521608	0.000015097	-0.000004068		
	5P3/2			0.540794435	0.000006174	-0.000000363		
	6S1/2			0.206448775	0.000001372	-0.000000205		
4P3/2 -- (4)	26.164098	-100.888446		1.157416838	0.000149079		-0.000007731	0.000000428
	4D3/2			1.094984386	0.000047326	-0.000002689		
	4D5/2			1.042603436	0.000093799	-0.000013335		
	5S1/2			0.636377610	0.000026172	-0.000003692		
	5P1/2			0.563020426	0.000006267	-0.000000487		
	5P3/2			0.534203877	0.000012116	-0.000001941		
	6S1/2			0.206236774	0.000001652	-0.000000239		
4D3/2 -- (4)	20.621991	-87.909036		1.047058173	0.000154731		-0.000000035	0.000000002
	4D5/2			1.051729891	0.000029906	-0.000000001		
	5S1/2			0.627894429	0.000009223	-0.000000246		
	5P1/2			0.551969397	0.000016354	-0.000001603		
	5P3/2			0.532923377	0.000004917	-0.000000197		
	6S1/2			0.205735978	0.000000585	-0.000000020		
4D5/2 -- (6)	20.016664	-86.595440		1.038403409	0.000134060		-0.000000008	0.000000001
	5S1/2			0.626465691	0.000011348	-0.000000239		
	5P1/2			0.555798690	0.000005186	-0.000000084		
	5P3/2			0.530010710	0.000011314	-0.000000828		
	6S1/2			0.205651944	0.000000697	-0.000000019		
5S1/2 -- (2)	6.134632	-41.759619		0.516918243	0.000007899		-0.000237527	0.000003751
	5P1/2			0.422956603	0.000008044	-0.000001091		
	5P3/2			0.412247671	0.000005625	-0.000001383		
	6S1/2			0.196268932	0.000000347	-0.000000147		
5P1/2 -- (2)	4.499981	-35.544711		0.444668831	0.000009744		-0.000008636	0.000000211
	5P3/2			0.410523553	0.000001554	-0.000000003		
	6S1/2			0.195314276	0.000000680	-0.000000098		
5P3/2 -- (4)	3.959221	-33.625080		0.408227645	0.000005558		-0.000000911	0.000000050
	6S1/2			0.194166569	0.000000763	-0.000000107		
6S1/2 -- (1)	0.489097	-11.784020		0.000000000	0.000000000		-0.000015701	0.000000248
ETOT	-7781.22455	8284.96027	-18929.68146	2857.99542	6.862035493	-0.712085167	-0.659609132	0.010890707

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.							
1S1/2 -- (2)	1756.612375	-3395.795597	36.908359608	2.388163172		-0.308325017	0.005330432
2S1/2			11.159979342	0.117562441	-0.013498528		
2P1/2			13.260343103	0.243263870	-0.035921955		
2P3/2			12.301536619	0.122095589	-0.035305173		
3S1/2			4.508338344	0.023150661	-0.002839601		
3P1/2			4.839027340	0.044229251	-0.006544618		
3P3/2			4.584667496	0.022621931	-0.006736858		
3D3/2			4.578979756	0.000939375	-0.000120022		
3D5/2			4.500532831	0.000383353	-0.000123010		
4S1/2			1.968361446	0.005228400	-0.000649490		
4P1/2			1.959778037	0.009224893	-0.001365655		
4P3/2			1.869286700	0.004701903	-0.001408016		
4D3/2			1.669367831	0.000185880	-0.000023840		
4D5/2			1.644160143	0.000075527	-0.000024405		
5S1/2			0.786701255	0.000880162	-0.000109621		
5P1/2			0.698510857	0.001264647	-0.000187236		
5P3/2			0.663610680	0.000628933	-0.000188528		
6S1/2			0.257009563	0.000083087	-0.000010392		
2S1/2 -- (2)	385.782362	-797.325215	8.273005684	0.04057862		-0.036833762	0.000613290
2P1/2			8.098520725	0.012322276	-0.000041355		
2P3/2			7.854806041	0.020757209	-0.000199509		
3S1/2			3.834882330	0.004305145	-0.001052180		
3P1/2			4.106760977	0.006704046	-0.001059533		
3P3/2			3.961567525	0.006129044	-0.000798904		
3D3/2			4.306560447	0.004710796	-0.000654439		
3D5/2			4.247516904	0.002104504	-0.000647438		
4S1/2			1.823016474	0.000965050	-0.000247274		
4P1/2			1.810475365	0.001452053	-0.000236279		
4P3/2			1.742988211	0.001290389	-0.000182908		
4D3/2			1.622869675	0.000716946	-0.000104214		
4D5/2			1.601134001	0.000331435	-0.000103534		
5S1/2			0.762435374	0.000162178	-0.000041886		
5P1/2			0.678121473	0.000200168	-0.000032721		
5P3/2			0.646787798	0.000172825	-0.000024829		
6S1/2			0.254721531	0.000015306	-0.000003957		
2P1/2 -- (2)	385.794441	-796.814320	9.926721918	0.090559403		-0.001728912	0.000044497
2P3/2			9.158365203	0.014375384	-0.000006087		
3S1/2			4.030882500	0.002958763	-0.000218595		
3P1/2			4.093511814	0.006589232	-0.000988691		
3P3/2			4.101431256	0.002870221	-0.000079373		
3D3/2			4.296576481	0.014134576	-0.003362243		
3D5/2			4.359157537	0.000470591	-0.000102768		
4S1/2			1.862859530	0.000657944	-0.000053463		
4P1/2			1.811463306	0.001328237	-0.000216571		
4P3/2			1.770836657	0.000592943	-0.000019016		
4D3/2			1.622276999	0.002249668	-0.000548292		
4D5/2			1.619271657	0.000085904	-0.000017736		
5S1/2			0.769012657	0.000110397	-0.000009130		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.							
5P1/2			0.678337445	0.000180985	-0.000029910		
5P3/2			0.650486139	0.000079210	-0.000002603		
6S1/2			0.255340718	0.000010417	-0.000000864		
2P3/2 -- (4)	334.540707	-727.162636	9.008890082	0.051750019		-0.000182947	0.000010641
3S1/2			3.994391577	0.003869833	-0.000247255		
3P1/2			4.211810488	0.002380799	-0.000097434		
3P3/2			3.983446069	0.005477852	-0.000482817		
3D3/2			4.386238208	0.004172887	-0.000422818		
3D5/2			4.254414667	0.007104112	-0.002015099		
4S1/2			1.854888661	0.000836182	-0.000058497		
4P1/2			1.831380426	0.000486349	-0.000022913		
4P3/2			1.748966306	0.001093843	-0.000105798		
4D3/2			1.635908261	0.000668351	-0.000068366		
4D5/2			1.603064088	0.001112045	-0.000323475		
5S1/2			0.767678959	0.000139551	-0.000009934		
5P1/2			0.680964291	0.000066432	-0.000003204		
5P3/2			0.647616642	0.000145289	-0.000014264		
6S1/2			0.255214925	0.000013157	-0.000000939		
3S1/2 -- (2)	113.651214	-286.271771	3.075852273	0.002174743		-0.007469645	0.000123714
3P1/2			2.793441377	0.000811835	-0.000023723		
3P3/2			2.732093858	0.001220504	-0.000056341		
3D3/2			3.076350366	0.000738439	-0.000025902		
3D5/2			3.056832279	0.000982480	-0.000028114		
4S1/2			1.615667372	0.000307637	-0.000109443		
4P1/2			1.613160376	0.000336578	-0.000059335		
4P3/2			1.559138306	0.000357290	-0.000042451		
4D3/2			1.466874884	0.000144950	-0.000013290		
4D5/2			1.450723925	0.000156904	-0.000012358		
5S1/2			0.729423571	0.000051509	-0.000018949		
5P1/2			0.651797588	0.000048407	-0.000008795		
5P3/2			0.622854062	0.000049249	-0.000006239		
6S1/2			0.251627246	0.000004858	-0.000001794		
3P1/2 -- (2)	110.873060	-281.577710	3.195066667	0.004205779		-0.000383116	0.000009793
3P3/2			2.971157961	0.000671198	-0.000000769		
3D3/2			2.977564759	0.001589190	-0.000105033		
3D5/2			3.175278673	0.000728222	-0.000004083		
4S1/2			1.657258206	0.000283471	-0.000034946		
4P1/2			1.584963771	0.000406999	-0.000092067		
4P3/2			1.576040530	0.000171821	-0.000008349		
4D3/2			1.469772813	0.000351881	-0.000050973		
4D5/2			1.460536140	0.000104663	-0.000003455		
5S1/2			0.735431440	0.000046010	-0.000006017		
5P1/2			0.648689447	0.000054727	-0.000013029		
5P3/2			0.624933816	0.000023007	-0.000001246		
6S1/2			0.252183180	0.000004322	-0.000000570		
3P3/2 -- (4)	99.259497	-264.248631	2.960850259	0.002469562		-0.000041248	0.000002383
3D3/2			3.102566573	0.000573235	-0.000008191		
3D5/2			2.979963882	0.001381105	-0.000043853		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM	6S2	Z=56 A=138 R=1.17187E-04 A.U.					
4S1/2			1.646468155	0.000371572	-0.000041572		
4P1/2			1.619348913	0.000159603	-0.000010504		
4P3/2			1.544808209	0.000338416	-0.000045754		
4D3/2			1.467260609	0.000114825	-0.000009827		
4D5/2			1.447576547	0.000282357	-0.000036044		
5S1/2			0.733711690	0.000059253	-0.000006957		
5P1/2			0.652527055	0.000021647	-0.000001579		
5P3/2			0.621223809	0.000044282	-0.000006356		
6S1/2			0.252021912	0.000005554	-0.000000656		
3D3/2 -- (4)	94.443031	-256.621303	3.315437593	0.003949612		-0.000000212	0.000000016
3D5/2			3.329761887	0.000745785	-0.000000007		
4S1/2			1.681775211	0.000157125	-0.000003533		
4P1/2			1.635000639	0.000288567	-0.000018252		
4P3/2			1.591912269	0.000115997	-0.000002805		
4D3/2			1.466257211	0.000338231	-0.000028067		
4D5/2			1.477830444	0.000111702	-0.000001398		
5S1/2			0.739240242	0.000025614	-0.000000725		
5P1/2			0.654767310	0.000037168	-0.000002483		
5P3/2			0.626964955	0.000015208	-0.000000421		
6S1/2			0.252538855	0.000002408	-0.000000070		
3D5/2 -- (6)	91.669758	-252.203482	3.283362252	0.003431283		-0.000000047	0.000000005
4S1/2			1.678180617	0.000188856	-0.000003541		
4P1/2			1.644496375	0.000126775	-0.000001639		
4P3/2			1.582497509	0.000234256	-0.000009669		
4D3/2			1.491481901	0.000091611	-0.000001465		
4D5/2			1.456380072	0.000315975	-0.000018537		
5S1/2			0.738663405	0.000030231	-0.000000726		
5P1/2			0.655815074	0.000016779	-0.000000280		
5P3/2			0.625835778	0.000029719	-0.000001323		
6S1/2			0.252484714	0.000002835	-0.000000070		
4S1/2 -- (2)	33.838938	-117.858845	1.330648440	0.000164205		-0.001697561	0.000028084
4P1/2			1.160161877	0.000092644	-0.000007704		
4P3/2			1.137169419	0.000099186	-0.000013119		
4D3/2			1.159482646	0.000076318	-0.000007875		
4D5/2			1.151148922	0.000062543	-0.000008125		
5S1/2			0.669366314	0.000019148	-0.000008198		
5P1/2			0.608466728	0.000011303	-0.000002277		
5P3/2			0.583082717	0.000012346	-0.000001787		
6S1/2			0.246194678	0.000001809	-0.000000795		
4P1/2 -- (2)	31.118261	-111.988262	1.288080163	0.000280645		-0.000082982	0.000002118
4P3/2			1.196774983	0.000044419	-0.000000087		
4D3/2			1.072555371	0.000166795	-0.000029548		
4D5/2			1.159424318	0.000037410	-0.000001076		
5S1/2			0.676156323	0.000025469	-0.000003706		
5P1/2			0.597576169	0.000019037	-0.000005214		
5P3/2			0.583917957	0.000007811	-0.000000471		
6S1/2			0.246734413	0.000002310	-0.000000348		
4P3/2 -- (4)	28.028352	-106.257746	1.195537400	0.000165007		-0.000008902	0.000000514

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BARIUM 6S2 Z=56 A=138 R=1.17187E-04 A.U.							
4D3/2			1.137975627	0.000052113	-0.000002872		
4D5/2			1.083521049	0.000104268	-0.000014314		
5S1/2			0.672319924	0.000031184	-0.000004425		
5P1/2			0.606076676	0.000007921	-0.000000628		
5P3/2			0.576216345	0.000015360	-0.000002510		
6S1/2			0.246395964	0.000002795	-0.000000408		
4D3/2 -- (4)	22.496571	-93.524059	1.094000655	0.000176578		-0.000000043	0.000000003
4D5/2			1.098845118	0.000034152	-0.000000001		
5S1/2			0.664452797	0.000011104	-0.000000317		
5P1/2			0.594568274	0.000020611	-0.000002060		
5P3/2			0.575557759	0.000006256	-0.000000257		
6S1/2			0.245735134	0.000001001	-0.000000036		
4D5/2 -- (6)	21.830058	-92.107341	1.084906265	0.000152973		-0.000000010	0.000000001
5S1/2			0.662909304	0.000013545	-0.000000309		
5P1/2			0.598698144	0.000006523	-0.000000112		
5P3/2			0.572309582	0.000014307	-0.000001066		
6S1/2			0.245605755	0.000001183	-0.000000036		
5S1/2 -- (2)	7.080854	-45.339704	0.548591820	0.000009607		-0.000286146	0.000004733
5P1/2			0.453871259	0.000009635	-0.000001284		
5P3/2			0.443172392	0.000006987	-0.000001688		
6S1/2			0.231837186	0.000000620	-0.000000276		
5P1/2 -- (2)	5.443833	-39.424600	0.482105013	0.000012604		-0.000011456	0.000000292
5P3/2			0.445545561	0.000002002	-0.000000004		
6S1/2			0.231005344	0.000001202	-0.000000177		
5P3/2 -- (4)	4.819441	-37.373660	0.443667848	0.000007246		-0.000001199	0.000000069
6S1/2			0.229518818	0.000001354	-0.000000198		
6S1/2 -- (2)	0.801432	-14.513784	0.184717898	0.000000313		-0.000027017	0.000000447
ETOT	-8129.75620	8677.34283	-19780.43670	2967.49304	7.306863552	-0.759973531	-0.714629773
LANTHANUM 5D1 Z=57 A=139 R=1.17469E-04 A.U.							
1S1/2 -- (2)	1830.143671	-3531.324578	37.671694794	2.524811007		-0.333158744	0.006027675
2S1/2			11.405899072	0.124754026	-0.014349746		
2P1/2			13.565419785	0.258258906	-0.038024044		
2P3/2			12.547413389	0.129199329	-0.037359869		
3S1/2			4.618992563	0.024722641	-0.003038258		
3P1/2			4.964291782	0.047274136	-0.006972541		
3P3/2			4.693960729	0.024148182	-0.007192157		
3D3/2			4.693941459	0.001010927	-0.000128864		
3D5/2			4.610612416	0.000412166	-0.000132266		
4S1/2			2.029584413	0.005668991	-0.000705678		
4P1/2			2.027316532	0.010050468	-0.001482985		
4P3/2			1.931213837	0.005121797	-0.001534051		
4D3/2			1.740341743	0.000208175	-0.000026639		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM 5D1	Z=57 A=139 R=1.17469E-04 A.U.						
4D5/2			1.713628318	0.000084566	-0.000027332		
5S1/2			0.830480506	0.001012742	-0.000126467		
5P1/2			0.747323110	0.001499289	-0.000221245		
5P3/2			0.709869130	0.000747541	-0.000224137		
5D3/2			0.438007379	0.000013122	-0.000001680		
6S1/2			0.278249047	0.000101928	-0.000012728		
2S1/2 -- (2)	403.428881	-830.803789	8.452418095	0.042670398		-0.040077390	0.000697835
2P1/2			8.278335695	0.013119348	-0.000042627		
2P3/2			8.019312939	0.022012764	-0.000218092		
3S1/2			3.925269001	0.004615585	-0.001128376		
3P1/2			4.207847410	0.007219888	-0.001140848		
3P3/2			4.054074223	0.006542488	-0.000851600		
3D3/2			4.412908556	0.005054929	-0.000702104		
3D5/2			4.350298150	0.002256964	-0.000694548		
4S1/2			1.877596239	0.001050402	-0.000269296		
4P1/2			1.870095430	0.001594031	-0.000259367		
4P3/2			1.798890391	0.001406075	-0.000199258		
4D3/2			1.690534838	0.000796792	-0.000115901		
4D5/2			1.667637441	0.000368779	-0.000115255		
5S1/2			0.803558810	0.000187313	-0.000048416		
5P1/2			0.723962330	0.000239153	-0.000039098		
5P3/2			0.690640950	0.000205499	-0.000029535		
5D3/2			0.434927561	0.000048488	-0.000007097		
6S1/2			0.275542966	0.000018847	-0.000004877		
2P1/2 -- (2)	403.428087	-830.280384	10.150861622	0.096501244		-0.001962726	0.000052635
2P3/2			9.352898774	0.015223515	-0.000006973		
3S1/2			4.127530923	0.003169919	-0.000234026		
3P1/2			4.194739421	0.007073706	-0.001062470		
3P3/2			4.198422283	0.003067715	-0.000084826		
3D3/2			4.403210108	0.015170147	-0.003608949		
3D5/2			4.465474361	0.000504217	-0.000110243		
4S1/2			1.919319104	0.000715700	-0.000058169		
4P1/2			1.871285831	0.001453075	-0.000237335		
4P3/2			1.828207283	0.000646744	-0.000020772		
4D3/2			1.690016659	0.002503692	-0.000610540		
4D5/2			1.687064566	0.000095750	-0.000019774		
5S1/2			0.810863568	0.000127426	-0.000010547		
5P1/2			0.724235916	0.000215393	-0.000035678		
5P3/2			0.694887748	0.000094268	-0.000003105		
5D3/2			0.434904953	0.000153333	-0.000037513		
6S1/2			0.276275925	0.000012818	-0.000001064		
2P3/2 -- (4)	347.897152	-754.920164	9.188827031	0.054825147		-0.000203649	0.000012329
3S1/2			4.088457668	0.004138878	-0.000265974		
3P1/2			4.314811482	0.002548759	-0.000104845		
3P3/2			4.075441980	0.005849118	-0.000516875		
3D3/2			4.494367321	0.004479656	-0.000453416		
3D5/2			4.356572456	0.007619675	-0.002161574		
4S1/2			1.910654243	0.000907394	-0.000063852		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E (MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM	5D1	Z=57	A=139	R=1.17469E-04	A.U.		
4P1/2			1.891781732	0.000530602	-0.000025150		
4P3/2			1.804947028	0.001191119	-0.000115599		
4D3/2			1.704364821	0.000743503	-0.000075983		
4D5/2			1.669582436	0.001236610	-0.000359924		
5S1/2			0.809325275	0.000160646	-0.000011508		
5P1/2			0.727170166	0.000078854	-0.000003830		
5P3/2			0.691560085	0.000172565	-0.000017011		
5D3/2			0.435777686	0.000045577	-0.000004664		
6S1/2			0.276121248	0.000016146	-0.000001160		
3S1/2 -- (2)	119.519566	-298.957514	3.149174956	0.002338864		-0.008184071	0.000141733
3P1/2			2.861876880	0.000868830	-0.000024637		
3P3/2			2.796814956	0.001308285	-0.000060910		
3D3/2			3.152188303	0.000791771	-0.000027313		
3D5/2			3.131515069	0.001055510	-0.000029768		
4S1/2			1.662331497	0.000336273	-0.000119820		
4P1/2			1.663977940	0.000373569	-0.000065889		
4P3/2			1.607105780	0.000391337	-0.000046654		
4D3/2			1.524806797	0.000163800	-0.000015140		
4D5/2			1.507941604	0.000175540	-0.000014059		
5S1/2			0.767234738	0.000059733	-0.000022017		
5P1/2			0.694065399	0.000058504	-0.000010641		
5P3/2			0.663424120	0.000058914	-0.000007501		
5D3/2			0.424919017	0.000010588	-0.000001044		
6S1/2			0.271915275	0.000006005	-0.000002223		
3P1/2 -- (2)	116.684415	-294.204602	3.274879922	0.004529986		-0.000438641	0.000011680
3P3/2			3.043121355	0.000717231	-0.000000894		
3D3/2			3.053034679	0.001705972	-0.000111550		
3D5/2			3.254658476	0.000783419	-0.000004362		
4S1/2			1.705795156	0.000308622	-0.000038092		
4P1/2			1.634888376	0.000447298	-0.000101560		
4P3/2			1.624999582	0.000187765	-0.000009181		
4D3/2			1.528184823	0.000397837	-0.000058094		
4D5/2			1.518609154	0.000116781	-0.000003909		
5S1/2			0.773877470	0.000053126	-0.000006967		
5P1/2			0.690610950	0.000065402	-0.000015646		
5P3/2			0.665821646	0.000027440	-0.000001500		
5D3/2			0.425150780	0.000025898	-0.000004009		
6S1/2			0.272569479	0.000005318	-0.000000703		
3P3/2 -- (4)	104.048419	-275.418299	3.030354902	0.002648505		-0.000046359	0.000002787
3D3/2			3.178304577	0.000613438	-0.000008464		
3D5/2			3.052383609	0.001480872	-0.000045676		
4S1/2			1.694194277	0.000405650	-0.000045596		
4P1/2			1.670291054	0.000175259	-0.000011621		
4P3/2			1.592104296	0.000370586	-0.000050363		
4D3/2			1.525128294	0.000130006	-0.000011226		
4D5/2			1.504515595	0.000318257	-0.000041254		
5S1/2			0.771917114	0.000068530	-0.000008091		
5P1/2			0.694869689	0.000025850	-0.000001905		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM	5D1	Z=57	A=139	R=1.17469E-04	A.U.		
5P3/2			0.661571195	0.000052865	-0.000007639		
5D3/2			0.424941053	0.000008337	-0.000000761		
6S1/2			0.272373593	0.000006843	-0.000000814		
3D3/2 -- (4)	99.180884	-267.764808	3.400392152	0.004252043		-0.000000250	0.000000019
3D5/2			3.414269446	0.000802567	-0.000000008		
4S1/2			1.731399340	0.000171266	-0.000003889		
4P1/2			1.687235331	0.000316053	-0.000020084		
4P3/2			1.641679373	0.000126932	-0.000003086		
4D3/2			1.524732951	0.000377130	-0.000031675		
4D5/2			1.537141987	0.000124796	-0.000001583		
5S1/2			0.778088668	0.000029608	-0.000000850		
5P1/2			0.697501299	0.000044210	-0.000002975		
5P3/2			0.668146094	0.000018149	-0.000000508		
5D3/2			0.425065956	0.000022384	-0.000002017		
6S1/2			0.272988300	0.000002966	-0.000000088		
3D5/2 -- (6)	96.170294	-262.987886	3.365835192	0.003689907		-0.000000055	0.000000006
4S1/2			1.727539230	0.000205644	-0.000003899		
4P1/2			1.696942215	0.000138849	-0.000001818		
4P3/2			1.631776021	0.000253910	-0.000010590		
4D3/2			1.551248554	0.000102205	-0.000001660		
4D5/2			1.514352744	0.000351989	-0.000020915		
5S1/2			0.777431583	0.000034895	-0.000000852		
5P1/2			0.698654733	0.000019975	-0.000000340		
5P3/2			0.666852958	0.000035366	-0.000001585		
5D3/2			0.426504232	0.000006148	-0.000000114		
6S1/2			0.272922578	0.000003487	-0.000000088		
4S1/2 -- (2)	36.114366	-123.863312	1.370503349	0.000180456		-0.001888795	0.000032672
4P1/2			1.196677425	0.000100266	-0.000008147		
4P3/2			1.172433359	0.000108917	-0.000014309		
4D3/2			1.202176839	0.000083828	-0.000008518		
4D5/2			1.193536020	0.000069901	-0.000008817		
5S1/2			0.702092497	0.000022436	-0.000009672		
5P1/2			0.645602508	0.000013974	-0.000002828		
5P3/2			0.618888723	0.000015033	-0.000002193		
5D3/2			0.408352676	0.000002819	-0.000000326		
6S1/2			0.265650293	0.000002259	-0.000001000		
4P1/2 -- (2)	33.354694	-117.982043	1.330387983	0.000310561		-0.000096918	0.000002577
4P3/2			1.235531479	0.000048715	-0.000000104		
4D3/2			1.113216620	0.000183436	-0.000032057		
4D5/2			1.203526046	0.000042200	-0.000001175		
5S1/2			0.709692983	0.000029552	-0.000004324		
5P1/2			0.633708095	0.000023011	-0.000006392		
5P3/2			0.619955419	0.000009409	-0.000000581		
5D3/2			0.406148718	0.000005031	-0.000000767		
6S1/2			0.266288897	0.000002851	-0.000000433		
4P3/2 -- (4)	29.962466	-111.765754	1.233719411	0.000182079		-0.000010216	0.000000613
4D3/2			1.180602556	0.000057160	-0.000003056		
4D5/2			1.124083163	0.000115421	-0.000015310		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LANTHANUM 5D1 Z=57 A=139 R=1.17469E-04 A.U.							
5S1/2			0.705452504	0.000036425	-0.000005199		
5P1/2			0.642996066	0.000009595	-0.000000774		
5P3/2			0.611336444	0.000018551	-0.000003084		
5D3/2			0.407068186	0.000001989	-0.000000135		
6S1/2			0.265890900	0.000003469	-0.000000510		
4D3/2 -- (4)	24.433386	-99.242980	1.140376587	0.000200136		-0.000000053	0.000000004
4D5/2			1.145357963	0.000038724	-0.000000001		
5S1/2			0.698297397	0.000013077	-0.000000394		
5P1/2			0.631373460	0.000024894	-0.000002528		
5P3/2			0.611406619	0.000007573	-0.000000317		
5D3/2			0.401608489	0.000007387	-0.000000688		
6S1/2			0.265249534	0.000001253	-0.000000048		
4D5/2 -- (6)	23.700714	-97.714541	1.130784292	0.000173342		-0.000000012	0.000000001
5S1/2			0.696644840	0.000015838	-0.000000385		
5P1/2			0.635710972	0.000007869	-0.000000142		
5P3/2			0.607903020	0.000017239	-0.000001304		
5D3/2			0.404890510	0.000001997	-0.000000038		
6S1/2			0.265101524	0.000001473	-0.000000047		
5S1/2 -- (2)	8.012607	-48.798068	0.577331054	0.000011374		-0.000337894	0.000005843
5P1/2			0.480701438	0.000011168	-0.000001465		
5P3/2			0.469513427	0.000008333	-0.000001985		
5D3/2			0.366014384	0.000004240	-0.000000576		
6S1/2			0.249828115	0.000000797	-0.000000361		
5P1/2 -- (2)	6.326409	-42.960201	0.513584894	0.000015458		-0.000014565	0.000000387
5P3/2			0.474628776	0.000002431	-0.000000006		
5D3/2			0.338311198	0.000010191	-0.000002361		
6S1/2			0.249245234	0.000001531	-0.000000228		
5P3/2 -- (4)	5.601234	-40.709229	0.472679064	0.000008888		-0.000001502	0.000000090
5D3/2			0.353155995	0.000002845	-0.000000266		
6S1/2			0.247638507	0.000001740	-0.000000259		
5D3/2 -- (1)	2.169203	-24.969165	0.000000000	0.000000000		-0.000000003	0.000000000
6S1/2			0.222808368	0.000000310	-0.000000000		
6S1/2 -- (2)	0.966523	-16.007205	0.199516519	0.000000399		-0.000034015	0.000000588
ETOT	-8487.40063	9081.84786	-20658.83205	3083.38130	7.771741866	-0.810049720	-0.773436037 0.014010674
CERIUM 4F2 Z=58 A=140 R=1.17750E-04 A.U.							
1S1/2 -- (2)	1905.819469	-3670.326153	38.441357848	2.666934254		-0.359638636	0.006798968
2S1/2			11.655074486	0.132289298	-0.015243985		
2P1/2			13.875149409	0.273970008	-0.040215357		
2P3/2			12.795187408	0.136606606	-0.039502449		
3S1/2			4.731725779	0.026386337	-0.003249098		
3P1/2			5.092414404	0.050503002	-0.007424016		
3P3/2			4.805074160	0.025762303	-0.007673832		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58 A=140 R=1.17750E-04 A.U.					
3D3/2			4.811578076	0.001088169	-0.000138380		
3D5/2			4.723045994	0.000443236	-0.000142249		
4S1/2			2.081312205	0.006069335	-0.000757088		
4P1/2			2.081790179	0.010772024	-0.001584081		
4P3/2			1.978438936	0.005475060	-0.001640169		
4D3/2			1.785496572	0.000224823	-0.000028703		
4D5/2			1.756555960	0.000091166	-0.000029471		
4F5/2			1.092983362	0.000000163	-0.000000019		
5S1/2			0.835260185	0.001032753	-0.000129173		
5P1/2			0.745468425	0.001496208	-0.000220041		
5P3/2			0.704955286	0.000739146	-0.000221661		
6S1/2			0.270180477	0.000094700	-0.000011849		
2S1/2 -- (2)	421.741657	-865.309477	8.634120618	0.045426379		-0.043573273	0.000792195
2P1/2			8.460655805	0.013959235	-0.000043838		
2P3/2			8.185588716	0.023327893	-0.000238251		
3S1/2			4.017140484	0.004946357	-0.001209706		
3P1/2			4.310901958	0.007773996	-0.001228191		
3P3/2			4.148615806	0.006980561	-0.000907423		
3D3/2			4.521540606	0.005423415	-0.000753130		
3D5/2			4.455134359	0.002420181	-0.000744981		
4S1/2			1.924276605	0.001129100	-0.000289634		
4P1/2			1.918807705	0.001721832	-0.000280127		
4P3/2			1.842314585	0.001503671	-0.000213004		
4D3/2			1.734006728	0.000854556	-0.000124366		
4D5/2			1.709186272	0.000395335	-0.000123606		
4F5/2			1.092494696	0.000015668	-0.000002072		
5S1/2			0.808763478	0.000191783	-0.000049595		
5P1/2			0.722918188	0.000240501	-0.000039312		
5P3/2			0.686657822	0.000203277	-0.000029201		
6S1/2			0.267753672	0.000017581	-0.000004552		
2P1/2 -- (2)	421.713223	-864.759522	10.378294353	0.102767449		-0.002225115	0.000062097
2P3/2			9.549628088	0.016109306	-0.000007972		
3S1/2			4.225862371	0.003394620	-0.000250466		
3P1/2			4.297976695	0.007590921	-0.001141519		
3P3/2			4.296990772	0.003277063	-0.000090625		
3D3/2			4.512168402	0.016280196	-0.003873464		
3D5/2			4.573999730	0.000540247	-0.000118252		
4S1/2			1.967451631	0.000768843	-0.000062497		
4P1/2			1.920191825	0.001564155	-0.000255909		
4P3/2			1.872622634	0.000692316	-0.000022264		
4D3/2			1.733589051	0.002688624	-0.000655938		
4D5/2			1.729241430	0.000102768	-0.000021234		
4F5/2			1.092569660	0.000019177	-0.000004008		
5S1/2			0.815964602	0.000130390	-0.000010794		
5P1/2			0.723202061	0.000215898	-0.000035817		
5P3/2			0.690719177	0.000093343	-0.000003078		
6S1/2			0.268412144	0.000011951	-0.000000992		
2P3/2 -- (4)	361.612836	-783.311995	9.370252153	0.058040165		-0.000226328	0.000014249

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58	A=140	R=1.17750E-04	A.U.		
	3S1/2			4.184051356	0.004424445	-0.000286038	
	3P1/2			4.419771480	0.002727514	-0.000112800	
	3P3/2			4.168807310	0.006241994	-0.000553151	
	3D3/2			4.604830782	0.004808535	-0.000486162	
	3D5/2			4.460733087	0.008171687	-0.002318430	
	4S1/2			1.958150994	0.000972420	-0.000068832	
	4P1/2			1.940943559	0.000569571	-0.000027157	
	4P3/2			1.848324083	0.001272996	-0.000123962	
	4D3/2			1.748162898	0.000798026	-0.000081473	
	4D5/2			1.711062804	0.001324893	-0.000385812	
	4F5/2			1.092640909	0.000010848	-0.000001074	
	5S1/2			0.814391767	0.000163977	-0.000011814	
	5P1/2			0.725967098	0.000078815	-0.000003850	
	5P3/2			0.687502425	0.000170597	-0.000016870	
	6S1/2			0.268268045	0.000015017	-0.000001085	
3S1/2 -- (2)	125.664219	-312.084494		3.223650031	0.002514325	-0.008961596	0.000162030
	3P1/2			2.931532580	0.000929323	-0.000025522	
	3P3/2			2.862519743	0.001401662	-0.000065811	
	3D3/2			3.229438285	0.000848541	-0.000028744	
	3D5/2			3.207531420	0.001133555	-0.000031465	
	4S1/2			1.703364095	0.000362961	-0.000129428	
	4P1/2			1.706794604	0.000407631	-0.000071895	
	4P3/2			1.645797836	0.000420330	-0.000050212	
	4D3/2			1.563974447	0.000178306	-0.000016578	
	4D5/2			1.545692062	0.000189189	-0.000015345	
	4F5/2			1.073023385	0.000070182	-0.000009750	
	5S1/2			0.773234538	0.000061415	-0.000022644	
	5P1/2			0.694271512	0.000059369	-0.000010791	
	5P3/2			0.660848597	0.000058511	-0.000007455	
	6S1/2			0.264518941	0.000005626	-0.000002082	
3P1/2 -- (2)	122.782114	-307.288668		3.356206128	0.004877635	-0.000501700	0.000013899
	3P3/2			3.116281257	0.000765947	-0.000001038	
	3D3/2			3.130080292	0.001830475	-0.000118275	
	3D5/2			3.335578258	0.000842547	-0.000004653	
	4S1/2			1.748313044	0.000331771	-0.000040959	
	4P1/2			1.677183455	0.000483795	-0.000110109	
	4P3/2			1.664428611	0.000201330	-0.000009887	
	4D3/2			1.567738966	0.000433128	-0.000063620	
	4D5/2			1.556882564	0.000125618	-0.000004243	
	4F5/2			1.069916235	0.000119081	-0.000025955	
	5S1/2			0.779793747	0.000054447	-0.000007139	
	5P1/2			0.690993781	0.000065888	-0.000015786	
	5P3/2			0.663162814	0.000027223	-0.000001492	
	6S1/2			0.265108529	0.000004968	-0.000000656	
3P3/2 -- (4)	109.033880	-286.926622		3.100838874	0.002838927	-0.000052033	0.000003252
	3D3/2			3.255374089	0.000656098	-0.000008717	
	3D5/2			3.126056575	0.001587186	-0.000047447	
	4S1/2			1.735977736	0.000437406	-0.000049352	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CERIUM	4F2	Z=58 A=140 R=1.17750E-04 A.U.					
			1.713133463	0.000189362	-0.000012632		
			1.630330996	0.000398382	-0.000054331		
			1.564205939	0.000141837	-0.000012332		
			1.542080429	0.000345274	-0.000045314		
			1.073169263	0.000061379	-0.000006202		
			0.777806791	0.000070410	-0.000008339		
			0.695023818	0.000026006	-0.000001924		
			0.659074735	0.000052588	-0.000007616		
			0.264927538	0.000006410	-0.000000764		
3D3/2 -- (4)	104.147870	-279.294207	3.487214702	0.004576864		-0.000000295	0.000000024
			3.500562029	0.000863485	-0.000000010		
			1.774756884	0.000184393	-0.000004216		
			1.731183312	0.000340754	-0.000021718		
			1.681658008	0.000136349	-0.000003323		
			1.564426791	0.000406200	-0.000034414		
			1.576046211	0.000134388	-0.000001719		
			1.067428843	0.000261989	-0.000064494		
			0.783939218	0.000030380	-0.000000876		
			0.697623904	0.000044431	-0.000002998		
			0.665384925	0.000018045	-0.000000505		
			0.265484503	0.000002774	-0.000000082		
3D5/2 -- (6)	100.879358	-274.129577	3.449978334	0.003967150		-0.000000064	0.000000008
			1.770656550	0.000221238	-0.000004227		
			1.740966960	0.000149706	-0.000001978		
			1.671405509	0.000274565	-0.000011361		
			1.591430749	0.000110103	-0.000001806		
			1.552626197	0.000378241	-0.000022681		
			1.078182295	0.000053840	-0.000004080		
			0.783273725	0.000035783	-0.000000877		
			0.698706713	0.000020064	-0.000000343		
			0.664142397	0.000035141	-0.000001574		
			0.265423825	0.000003260	-0.000000082		
4S1/2 -- (2)	38.065548	-129.372361	1.404314253	0.000194691		-0.002075074	0.000037473
			1.226959345	0.000107057	-0.000008571		
			1.230929490	0.000117202	-0.000015448		
			1.232512704	0.000089834	-0.000009064		
			1.223148767	0.000075343	-0.000009400		
			0.938155728	0.000038057	-0.000004235		
			0.709440597	0.000023026	-0.000009876		
			0.647821030	0.000014089	-0.000002834		
			0.618563120	0.000014850	-0.000002157		
			0.298912750	0.000002113	-0.000000930		
4P1/2 -- (2)	35.199555	-123.327203	1.364669952	0.000335834		-0.000111289	0.000003078
			1.266192384	0.000052086	-0.000000121		
			1.141874830	0.000197074	-0.000034289		
			1.233932025	0.000045558	-0.000001259		
			0.914469830	0.000060000	-0.000010161		
			0.717050323	0.000030149	-0.000004393		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CERIUM	4F2	Z=58	A=140	R=1.17750E-04	A.U.			
4P3/2 -- (4)	31.458290	-116.519254	0.636387712	0.000023181	-0.000006385			
			0.619679050	0.000009295	-0.000000569			
			0.259504165	0.000002660	-0.000000401			
			1.263158066	0.000195665		-0.000011495	0.000000717	
4D3/2			1.209866308	0.000061021	-0.000003217			
4D5/2			1.151534294	0.000123747	-0.000016183			
4F5/2			0.920746265	0.000029364	-0.000002164			
5S1/2			0.712691394	0.000037415	-0.000005328			
5P1/2			0.645254031	0.000009646	-0.000000775			
5P3/2			0.611304763	0.000018453	-0.000003037			
6S1/2			0.259130086	0.000003259	-0.000000478			
4D3/2 -- (4)	25.710139	-103.605061	1.169510256	0.000215935		-0.000000063	0.000000005	
4D5/2			1.174172601	0.000041674	-0.000000001			
4F5/2			0.855947791	0.000090180	-0.000016237			
5S1/2			0.705821189	0.000013408	-0.000003398			
5P1/2			0.634110726	0.000025004	-0.000002518			
5P3/2			0.611527660	0.000007514	-0.000000309			
6S1/2			0.258568325	0.000001175	-0.000000044			
4D5/2 -- (6)	24.896943	-101.920124	1.158807439	0.000186605		-0.000000014	0.000000002	
4F5/2			0.894280789	0.000022890	-0.000000990			
5S1/2			0.704100318	0.000016266	-0.000000389			
5P1/2			0.638287379	0.000007928	-0.000000140			
5P3/2			0.608100465	0.000017124	-0.000001277			
6S1/2			0.258427337	0.000001385	-0.000000043			
4F5/2 -- (2)	10.988751	-63.393067	0.714146254	0.000067782		-0.000000000	0.000000000	
5S1/2			0.609322728	0.000005991	-0.000000163			
5P1/2			0.554411569	0.000007030	-0.000000204			
5P3/2			0.541784104	0.000003482	-0.000000038			
6S1/2			0.249245574	0.000000510	-0.000000000			
5S1/2 -- (2)	8.043911	-49.917959	0.581755603	0.000011525		-0.0000353592	0.000006384	
5P1/2			0.482499512	0.000011286	-0.000001486			
5P3/2			0.470158172	0.000008351	-0.000002012			
6S1/2			0.244123235	0.000000724	-0.000000321			
5P1/2 -- (2)	6.233407	-43.597038	0.513687494	0.000015313		-0.000015573	0.000000431	
5P3/2			0.473747211	0.000002375	-0.000000006			
6S1/2			0.243404320	0.000001385	-0.000000204			
5P3/2 -- (4)	5.457985	-41.126848	0.470836426	0.000008688		-0.000001563	0.000000098	
6S1/2			0.241742016	0.000001578	-0.000000231			
6S1/2 -- (2)	0.884558	-15.805524	0.194275715	0.000000364		-0.000032430	0.000000585	
ETOT	-8854.38568	9498.61463	-21589.79710	3230.22818	8.250207265	-0.861288923	-0.836144137	0.015827716

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEDYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
1S1/2 -- (2)	1983.676886	-3812.851872	39.217272552	2.814630186		-0.387854396	0.007650691
2S1/2			11.906209715	0.140142226	-0.016178010		
2P1/2			14.187949338	0.290339702	-0.042486064		
2P3/2			13.043169308	0.144278317	-0.041721385		
3S1/2			4.844725747	0.028120293	-0.003469340		
3P1/2			5.220810140	0.053862845	-0.007890879		
3P3/2			4.915735803	0.027438127	-0.008173895		
3D3/2			4.928270715	0.001168004	-0.000148168		
3D5/2			4.834352220	0.000475296	-0.000152547		
4S1/2			2.136746537	0.006512340	-0.000814022		
4P1/2			2.141368060	0.011583358	-0.001697473		
4P3/2			2.030976560	0.005877300	-0.001760980		
4D3/2			1.840122634	0.000245035	-0.000031208		
4D5/2			1.809127973	0.000099245	-0.000032089		
4F5/2			1.173768688	0.000000202	-0.000000024		
5S1/2			0.856062033	0.001103788	-0.000138347		
5P1/2			0.764550614	0.001598511	-0.000234267		
5P3/2			0.721029446	0.000786252	-0.000235833		
6S1/2			0.273980784	0.000098443	-0.000012343		
2S1/2 -- (2)	440.620628	-900.737694	8.816986219	0.048311680		-0.047326218	0.000897103
2P1/2			8.644299999	0.014838674	-0.000045093		
2P3/2			8.352411535	0.024694111	-0.000260328		
3S1/2			4.109170528	0.005292716	-0.001294765		
3P1/2			4.414063936	0.008354893	-0.001319650		
3P3/2			4.241683804	0.007433406	-0.000964744		
3D3/2			4.629443461	0.005805884	-0.000806055		
3D5/2			4.559101348	0.002589225	-0.000797278		
4S1/2			1.974010546	0.001216323	-0.000312153		
4P1/2			1.971714271	0.001865639	-0.000303473		
4P3/2			1.890251371	0.001614422	-0.000228556		
4D3/2			1.786343971	0.000925452	-0.000134749		
4D5/2			1.759808802	0.006428152	-0.000133932		
4F5/2			1.173194525	0.000019141	-0.000002532		
5S1/2			0.828712017	0.000205782	-0.000053243		
5P1/2			0.741228583	0.000258904	-0.000042314		
5P3/2			0.702285833	0.000216279	-0.000031056		
6S1/2			0.271544384	0.000018348	-0.000004753		
2P1/2 -- (2)	440.564103	-900.160661	10.607481230	0.109331344		-0.002518410	0.000073049
2P3/2			9.747042761	0.017026633	-0.000009094		
3S1/2			4.324407045	0.003629907	-0.000267621		
3P1/2			4.401321901	0.008132900	-0.001224195		
3P3/2			4.395283966	0.003494520	-0.000096625		
3D3/2			4.620421627	0.017431057	-0.004147690		
3D5/2			4.681560322	0.000577357	-0.000126540		
4S1/2			2.018821664	0.000827771	-0.000067286		
4P1/2			1.973304201	0.001689365	-0.000276804		
4P3/2			1.921737480	0.000744155	-0.000023956		
4D3/2			1.786027646	0.002915103	-0.000711510		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEODYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
4D5/2			1.780736772	0.000111404	-0.000023034		
4F5/2			1.173284272	0.000023394	-0.000004892		
5S1/2			0.836155855	0.000139832	-0.000011577		
5P1/2			0.741543484	0.000231662	-0.000038494		
5P3/2			0.706466492	0.000099422	-0.000003283		
6S1/2			0.272206425	0.000012465	-0.000001035		
2P3/2 -- (4)	375.590457	-812.230422	9.551600094	0.061373286		-0.000251041	0.000016422
3S1/2			4.279718829	0.004722724	-0.000307162		
3P1/2			4.524692939	0.002913895	-0.000121132		
3P3/2			4.261770316	0.006649818	-0.000590830		
3D3/2			4.714418713	0.005149598	-0.000520059		
3D5/2			4.563915365	0.008743403	-0.002480892		
4S1/2			2.008813468	0.001044394	-0.000074363		
4P1/2			1.994383754	0.000613394	-0.000029415		
4P3/2			1.896222922	0.001366145	-0.000133457		
4D3/2			1.800975927	0.000864779	-0.000088198		
4D5/2			1.761622439	0.001433971	-0.000417786		
4F5/2			1.173363864	0.000013303	-0.000001317		
5S1/2			0.834470031	0.000175397	-0.000012711		
5P1/2			0.744330501	0.000084327	-0.000004144		
5P3/2			0.703119398	0.000181397	-0.000017998		
6S1/2			0.272056201	0.000015623	-0.000001135		
3S1/2 -- (2)	131.977928	-325.521006	3.298205709	0.002698280		-0.009798213	0.000184686
3P1/2			3.001233722	0.000992697	-0.000026441		
3P3/2			2.928107457	0.001498895	-0.000071124		
3D3/2			3.306407597	0.000907880	-0.000030274		
3D5/2			3.283218405	0.001214830	-0.000033285		
4S1/2			1.746593123	0.000392510	-0.000140083		
4P1/2			1.752695415	0.000445975	-0.000078659		
4P3/2			1.687843997	0.000453058	-0.000054236		
4D3/2			1.610006897	0.000195823	-0.000018311		
4D5/2			1.590520385	0.000205926	-0.000016906		
4F5/2			1.150797532	0.000083860	-0.000011659		
5S1/2			0.792283455	0.000066150	-0.000024408		
5P1/2			0.711827472	0.000064506	-0.000011723		
5P3/2			0.675945408	0.000062507	-0.000007981		
6S1/2			0.268318306	0.000005894	-0.000002183		
3P1/2 -- (2)	129.042755	-320.673237	3.437542636	0.005242105		-0.000572486	0.000016480
3P3/2			3.189277236	0.000816284	-0.000001200		
3D3/2			3.206765349	0.001960869	-0.000125515		
3D5/2			3.416110353	0.000904069	-0.000004967		
4S1/2			1.793186569	0.000357415	-0.000044141		
4P1/2			1.722426870	0.000524805	-0.000119737		
4P3/2			1.707315888	0.000216688	-0.000010691		
4D3/2			1.614204907	0.000475640	-0.000070257		
4D5/2			1.602368480	0.000136482	-0.000004652		
4F5/2			1.147346618	0.000142290	-0.000031036		
5S1/2			0.799058086	0.000058444	-0.000007669		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEDDYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
5P1/2			0.708509100	0.000071008	-0.000017053		
5P3/2			0.678343385	0.000029043	-0.000001599		
6S1/2			0.268910757	0.000005187	-0.000000686		
3P3/2 -- (4)	114.109636	-298.635623	3.171005420	0.003037051		-0.000058250	0.000003782
3D3/2			3.331934677	0.000700475	-0.000008982		
3D5/2			3.199180769	0.001697645	-0.000049318		
4S1/2			1.780035826	0.000472598	-0.000053543		
4P1/2			1.759051897	0.000205210	-0.000013774		
4P3/2			1.671800757	0.000429869	-0.000058843		
4D3/2			1.610119859	0.000156130	-0.000013665		
4D5/2			1.586649897	0.000378169	-0.000050227		
4F5/2			1.150940249	0.000073325	-0.000007410		
5S1/2			0.796947910	0.000075740	-0.000009006		
5P1/2			0.712574644	0.000027995	-0.000002084		
5P3/2			0.674120871	0.000056225	-0.000008172		
6S1/2			0.268723785	0.000006706	-0.000000802		
3D3/2 -- (4)	109.192729	-291.003351	3.573270736	0.004914426		-0.000000347	0.000000029
3D5/2			3.586026771	0.000926679	-0.000000012		
4S1/2			1.820508890	0.000198879	-0.000004580		
4P1/2			1.778281689	0.000368482	-0.000023570		
4P3/2			1.725140998	0.000147020	-0.000003594		
4D3/2			1.610967273	0.000441491	-0.000037741		
4D5/2			1.622350217	0.000146128	-0.000001886		
4F5/2			1.144635071	0.000313359	-0.000077168		
5S1/2			0.803322280	0.000032640	-0.000000948		
5P1/2			0.715318934	0.000047731	-0.000003234		
5P3/2			0.680620467	0.000019284	-0.000000542		
6S1/2			0.269286937	0.000002899	-0.000000087		
3D5/2 -- (6)	105.651789	-285.429637	3.533249328	0.004254693		-0.000000075	0.000000009
4S1/2			1.816142130	0.000238420	-0.000004593		
4P1/2			1.788175883	0.000161855	-0.000002158		
4P3/2			1.714473396	0.000295667	-0.000012245		
4D3/2			1.638740697	0.000119694	-0.000001985		
4D5/2			1.598021891	0.000410369	-0.000024842		
4F5/2			1.156824563	0.000064474	-0.000004881		
5S1/2			0.802616053	0.000038410	-0.000000949		
5P1/2			0.716402256	0.000021550	-0.000000372		
5P3/2			0.679337866	0.000037501	-0.000001684		
6S1/2			0.269224302	0.000003403	-0.000000087		
4S1/2 -- (2)	40.227924	-135.256238	1.440449567	0.000210872		-0.002284725	0.000043012
4P1/2			1.259633628	0.000114641	-0.000009018		
4P3/2			1.231929032	0.000126711	-0.000016725		
4D3/2			1.267409085	0.000096902	-0.000009687		
4D5/2			1.257453753	0.000081993	-0.000010069		
4F5/2			0.999596012	0.000043821	-0.000004814		
5S1/2			0.727160817	0.000024863	-0.000010660		
5P1/2			0.664402564	0.000015381	-0.000003088		
5P3/2			0.632991001	0.000015912	-0.000002314		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PRAESEDYMIUM 4F3 Z=59 A=141 R=1.18030E-04 A.U.							
4P1/2 -- (2)	37.280402	-129.103416	0.262749353	0.000002220	-0.000000976	-0.000128127	0.000003683
4P3/2			1.402027760	0.000365100			
4D3/2			1.299854102	0.000056022	-0.000000142		
4D5/2			1.174993461	0.000213040	-0.000036810		
4F5/2			1.269394541	0.000049767	-0.000001357		
5S1/2			0.974120668	0.000069068	-0.000011535		
5P1/2			0.735106580	0.000032327	-0.000004709		
5P3/2			0.652815350	0.000025077	-0.000006909		
6S1/2			0.634230312	0.000009923	-0.000000609		
4P3/2 -- (4)	33.174468	-121.693045	0.263352643	0.000002777	-0.000000419	-0.000012977	0.000000841
4D3/2			1.295753943	0.000211634			
4D5/2			1.243999745	0.000065613	-0.000003393		
4F5/2			1.183751881	0.000133829	-0.000017146		
5S1/2			0.980242889	0.000033675	-0.000002437		
5P1/2			0.730492156	0.000040385	-0.000005757		
5P3/2			0.661751826	0.000010432	-0.000000841		
6S1/2			0.625607271	0.000019805	-0.000003261		
4D3/2 -- (4)	27.294896	-108.616901	0.262967098	0.000003424	-0.000000502	-0.000000076	0.000000006
4D5/2			1.205006050	0.000236254			
4F5/2			1.209496082	0.000045528	-0.000000001		
5S1/2			0.911123221	0.000103037	-0.000018224		
5P1/2			0.724032255	0.000014489	-0.000000435		
5P3/2			0.650797500	0.000026990	-0.000002721		
6S1/2			0.626190195	0.000008059	-0.000000331		
4D5/2 -- (6)	26.399736	-106.781128	0.262453043	0.000001236	-0.000000046	-0.000000016	0.000000002
4F5/2			1.193376821	0.000203859			
5S1/2			0.952382180	0.000026302	-0.000001108		
5P1/2			0.722218652	0.000017551	-0.000000424		
5P3/2			0.654972169	0.000008567	-0.000000152		
6S1/2			0.622693126	0.000018345	-0.000001364		
4F5/2 -- (3)	12.456820	-69.252392	0.262308126	0.000001456	-0.000000046	-0.000000000	0.000000000
5S1/2			0.778875365	0.000083619			
5P1/2			0.639431454	0.000006718	-0.000000160		
5P3/2			0.581190250	0.000007866	-0.000000191		
6S1/2			0.566055251	0.000003884	-0.000000034		
5S1/2 -- (2)	8.464122	-52.064944	0.255071092	0.000000557	-0.000000000	-0.0000387807	0.000007299
5P1/2			0.596143255	0.000012410			
5P3/2			0.494588848	0.000012038	-0.0000001578		
6S1/2			0.481320578	0.000008967	-0.0000002163		
5P1/2 -- (2)	6.559578	-45.490897	0.247968342	0.000000756	-0.0000000334	-0.000017817	0.000000512
5P3/2			0.526717970	0.000016510			
6S1/2			0.485160492	0.000002529	-0.0000000007		
5P3/2 -- (4)	5.705897	-42.790839	0.247274580	0.000001439	-0.0000000211	-0.000001749	0.000000113
6S1/2			0.481613226	0.000009293			
6S1/2 -- (2)	0.904511	-16.303754	0.245529614	0.000001648	-0.0000000240	-0.0000034594	0.000000651
ETOT	-9231.17480	9928.58962	-22537.22993	3370.51348	8.752574170	-0.915225111	0.017839172

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4 Z=60 A=144 R=1.18861E-04 A.U.							
1S1/2 -- (2)	2063.774526	-3958.973792	39.999685311	2.968044323		-0.417894506	0.008589747
2S1/2			12.159775384	0.148333300	-0.017154575		
2P1/2			14.504443331	0.307411457	-0.044841061		
2P3/2			13.291878845	0.152232587	-0.044022002		
3S1/2			4.958582358	0.029934150	-0.003700306		
3P1/2			5.350323960	0.057375447	-0.008375920		
3P3/2			5.026655047	0.029185812	-0.008695366		
3D3/2			5.045153464	0.001251461	-0.000158356		
3D5/2			4.945615789	0.000508760	-0.000163298		
4S1/2			2.191946569	0.006973282	-0.000873428		
4P1/2			2.200628415	0.012426294	-0.001814465		
4P3/2			2.082824081	0.006293450	-0.001885973		
4D3/2			1.893668419	0.000265997	-0.000033794		
4D5/2			1.860516886	0.000107602	-0.000034797		
4F5/2			1.240573633	0.000000241	-0.000000028		
5S1/2			0.876204453	0.001175672	-0.000147663		
5P1/2			0.782866748	0.001700969	-0.000248388		
5P3/2			0.736213789	0.000832855	-0.000249855		
6S1/2			0.277843687	0.000102146	-0.000012834		
2S1/2 -- (2)	460.118893	-937.148904	9.001403452	0.051337221		-0.051355892	0.001013631
2P1/2			8.829685454	0.015760700	-0.000046362		
2P3/2			8.520170843	0.026115760	-0.000284430		
3S1/2			4.201787814	0.005656976	-0.001384184		
3P1/2			4.517935436	0.008967723	-0.001416055		
3P3/2			4.335613712	0.007904365	-0.001024057		
3D3/2			4.737567923	0.006206122	-0.000861407		
3D5/2			4.663116623	0.002765826	-0.000851963		
4S1/2			2.023531838	0.001307608	-0.000335716		
4P1/2			2.024313266	0.002016554	-0.000327950		
4P3/2			1.937609814	0.001728799	-0.000244555		
4D3/2			1.837669318	0.000998799	-0.000145490		
4D5/2			1.809329108	0.000462040	-0.000144608		
4F5/2			1.239919870	0.000022648	-0.000002997		
5S1/2			0.848049984	0.000220053	-0.000056961		
5P1/2			0.758824432	0.000277582	-0.000045357		
5P3/2			0.717081131	0.000229117	-0.000032879		
6S1/2			0.275400372	0.000019114	-0.000004953		
2P1/2 -- (2)	460.030541	-936.541530	10.838974256	0.116216750		-0.002846115	0.000085709
2P3/2			9.945627904	0.017978088	-0.000010352		
3S1/2			4.423642825	0.003877276	-0.000285617		
3P1/2			4.505389764	0.008703550	-0.001311208		
3P3/2			4.493883724	0.003721519	-0.000102875		
3D3/2			4.728926001	0.018634685	-0.004434493		
3D5/2			4.789148663	0.000615974	-0.000135195		
4S1/2			2.069979758	0.000889429	-0.000072288		
4P1/2			2.026114314	0.001820470	-0.000298683		
4P3/2			1.970260494	0.000797869	-0.000025707		
4D3/2			1.837461972	0.003149523	-0.000769048		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4 Z=60 A=144 R=1.18861E-04 A.U.							
4D5/2			1.831100742	0.000120297	-0.000024893		
4F5/2			1.240023898	0.000027641	-0.000005782		
5S1/2			0.855724331	0.000149453	-0.000012374		
5P1/2			0.759169982	0.000247611	-0.000041204		
5P3/2			0.721369489	0.000105452	-0.000003485		
6S1/2			0.276065300	0.000012979	-0.000001077		
2P3/2 -- (4)	389.861554	-841.710921	9.733345069	0.064834410		-0.000277961	0.000018876
3S1/2			4.375924618	0.005035535	-0.000329508		
3P1/2			4.630213140	0.003109253	-0.000129914		
3P3/2			4.354881214	0.007075148	-0.000630215		
3D3/2			4.824137985	0.005506386	-0.000555453		
3D5/2			4.667050672	0.009340700	-0.002650636		
4S1/2			2.059230173	0.001119421	-0.000380174		
4P1/2			2.047474449	0.000659044	-0.000031782		
4P3/2			1.943511523	0.001462472	-0.000143307		
4D3/2			1.852741021	0.000933766	-0.000095133		
4D5/2			1.811058535	0.001546452	-0.000450770		
4F5/2			1.240109758	0.00015801	-0.000001564		
5S1/2			0.853923203	0.000186978	-0.000013631		
5P1/2			0.761967707	0.000089867	-0.000004441		
5P3/2			0.717898111	0.000192076	-0.000019118		
6S1/2			0.275908946	0.000016224	-0.000001186		
3S1/2 -- (2)	138.500552	-339.316502	3.373187808	0.002892087		-0.010700427	0.000209983
3P1/2			3.071358721	0.001059298	-0.000027373		
3P3/2			2.993925603	0.001600685	-0.000076866		
3D3/2			3.383634818	0.000970185	-0.000031885		
3D5/2			3.359103106	0.001300028	-0.000035212		
4S1/2			1.789687499	0.000423513	-0.000151251		
4P1/2			1.798381006	0.000486492	-0.000085800		
4P3/2			1.729463815	0.000486807	-0.000058382		
4D3/2			1.655258628	0.000214101	-0.000020123		
4D5/2			1.634499491	0.000223291	-0.000018529		
4F5/2			1.214911001	0.000097260	-0.000013531		
5S1/2			0.810790721	0.000070995	-0.000026210		
5P1/2			0.728740422	0.000069765	-0.000012675		
5P3/2			0.690285912	0.000066453	-0.000008499		
6S1/2			0.272185664	0.000006162	-0.000002283		
3P1/2 -- (2)	135.511394	-334.415767	3.519373190	0.005626434		-0.000652069	0.000019483
3P3/2			3.262538713	0.000868594	-0.000001385		
3D3/2			3.283702445	0.002098041	-0.000133214		
3D5/2			3.496864837	0.000968560	-0.000005303		
4S1/2			1.837920878	0.000384225	-0.000047463		
4P1/2			1.767470013	0.000567881	-0.000129845		
4P3/2			1.749772365	0.000232562	-0.000011525		
4D3/2			1.659892774	0.000519878	-0.000077168		
4D5/2			1.646997274	0.000147764	-0.000005077		
4F5/2			1.211185116	0.000165034	-0.0000336019		
5S1/2			0.817769957	0.000062519	-0.000008208		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4 Z=60 A=144 R=1.18861E-04 A.U.							
5P1/2			0.725388374	0.000076214	-0.000018341		
5P3/2			0.692761406	0.000030844	-0.000001705		
6S1/2			0.272780436	0.000005406	-0.000000715		
3P3/2 -- (4)	119.309486	-310.589356	3.241257913	0.003244336		-0.000065074	0.000004385
3D3/2			3.408563691	0.000746864	-0.000009249		
3D5/2			3.272319375	0.001813143	-0.000051244		
4S1/2			1.823919960	0.000509551	-0.000057967		
4P1/2			1.804718373	0.000221829	-0.000014978		
4P3/2			1.712827597	0.000462607	-0.000063540		
4D3/2			1.655224033	0.000171122	-0.000015067		
4D5/2			1.630345947	0.000412435	-0.000055380		
4F5/2			1.215035153	0.000085027	-0.000008592		
5S1/2			0.815534980	0.000081197	-0.000009693		
5P1/2			0.729476675	0.000030011	-0.000002247		
5P3/2			0.688412250	0.000059853	-0.000008728		
6S1/2			0.272587502	0.000007004	-0.000000841		
3D3/2 -- (4)	114.363276	-302.957657	3.659388965	0.005268259		-0.000000407	0.000000035
3D5/2			3.671483695	0.000992808	-0.000000013		
4S1/2			1.866074214	0.000214024	-0.000004962		
4P1/2			1.825123723	0.000397519	-0.000025518		
4P3/2			1.768146982	0.000158105	-0.000003876		
4D3/2			1.656703399	0.000478134	-0.000041212		
4D5/2			1.667743106	0.000158297	-0.000002060		
4F5/2			1.208296767	0.000363822	-0.000089621		
5S1/2			0.822138710	0.000034943	-0.000001021		
5P1/2			0.732357779	0.000051073	-0.000003475		
5P3/2			0.695082533	0.000020519	-0.000000579		
6S1/2			0.273155919	0.000003024	-0.000000091		
3D5/2 -- (6)	110.532557	-296.949935	3.616444454	0.004555489		-0.000000088	0.000000011
4S1/2			1.861430052	0.000256368	-0.000004976		
4P1/2			1.835111793	0.000174551	-0.000002348		
4P3/2			1.757060099	0.000317567	-0.000013162		
4D3/2			1.685203225	0.000129644	-0.000002171		
4D5/2			1.642524877	0.000443612	-0.000027090		
4F5/2			1.221728931	0.000074938	-0.000005667		
5S1/2			0.821391300	0.000041083	-0.000001023		
5P1/2			0.733437891	0.000023050	-0.000000401		
5P3/2			0.693762187	0.000039851	-0.000001792		
6S1/2			0.273091336	0.000003547	-0.000000091		
4S1/2 -- (2)	42.440186	-141.253947	1.476410241	0.000227815		-0.002510300	0.000049199
4P1/2			1.292125131	0.000122535	-0.000009478		
4P3/2			1.262656032	0.000136643	-0.000018088		
4D3/2			1.301817227	0.000104264	-0.000010335		
4D5/2			1.291234446	0.000088900	-0.000010768		
4F5/2			1.049800548	0.000049234	-0.000005345		
5S1/2			0.744430077	0.000026735	-0.000011454		
5P1/2			0.680431837	0.000016699	-0.000003346		
5P3/2			0.646760427	0.000016950	-0.000002469		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEODYMIUM 4F4	Z=60	A=144	R=1.18861E-04	A.U.			
4P1/2 -- 6S1/2 (2)	39.408115	-134.986854	0.266654541	0.000002325	-0.000001021		
4P3/2 4P3/2			1.439147177	0.000395773		-0.000147073	0.000004387
4D3/2 4P3/2			1.333194847	0.000060064	-0.000000166		
4D5/2 4D3/2			1.207653342	0.000229751	-0.000039461		
4F5/2 4F5/2			1.304309082	0.000054125	-0.000001459		
5S1/2 5S1/2			1.023005342	0.000077611	-0.000012798		
5P1/2 5P1/2			0.752695607	0.000034529	-0.000005026		
5P3/2 5P3/2			0.668706423	0.000027000	-0.000007438		
6S1/2 6S1/2			0.648118465	0.000010539	-0.000000649		
4P3/2 -- (4)	34.910376	-126.931295	0.267268515	0.000002893	-0.000000436		
4D3/2 4D3/2			1.327937585	0.000228196		-0.000014602	0.000000982
4D5/2 4D5/2			1.277551256	0.000070356	-0.000003573		
4F5/2 4F5/2			1.215385516	0.000144272	-0.000018138		
5S1/2 5S1/2			1.028750169	0.000037697	-0.000002683		
5P1/2 5P1/2			0.747817457	0.000043424	-0.000006196		
5P3/2 5P3/2			0.677689202	0.000011228	-0.000000909		
6S1/2 6S1/2			0.639256903	0.000021150	-0.000003483		
4D3/2 -- (4)	28.893546	-113.673233	0.266871084	0.000003589	-0.000000526		
4D5/2 4D5/2			1.239801005	0.000257341		-0.000000090	0.000000008
4F5/2 4F5/2			1.244082057	0.000049512	-0.000000001		
5S1/2 5S1/2			0.956497611	0.000115386	-0.000020032		
5P1/2 5P1/2			0.741730748	0.000015586	-0.000000471		
5P3/2 5P3/2			0.666903284	0.000028997	-0.000002924		
6S1/2 6S1/2			0.640169780	0.000008598	-0.000000352		
4D5/2 -- (6)	27.910673	-111.676300	0.266399124	0.000001297	-0.000000048		
4F5/2 4F5/2			1.227185196	0.000221704		-0.000000019	0.000000002
5S1/2 5S1/2			0.999987149	0.000029511	-0.000001215		
5P1/2 5P1/2			0.739820097	0.000018857	-0.000000460		
5P3/2 5P3/2			0.671073980	0.000009214	-0.000000164		
6S1/2 6S1/2			0.636602709	0.000019556	-0.000001449		
4F5/2 -- (4)	13.789743	-74.434464	0.266253052	0.000001527	-0.000000048		
5S1/2 5S1/2			0.829808627	0.000098686		-0.000000000	0.000000000
5P1/2 5P1/2			0.663699596	0.000007396	-0.000000158		
5P3/2 5P3/2			0.602832280	0.000008645	-0.000000182		
6S1/2 6S1/2			0.585321661	0.000004253	-0.000000032		
5S1/2 -- (2)	8.878920	-54.213920	0.259967668	0.000000600	-0.000000000		
5P1/2 5P1/2			0.610115363	0.000013307		-0.000423865	0.000008305
5P3/2 5P3/2			0.506275551	0.000012797	-0.0000001672		
6S1/2 6S1/2			0.492031117	0.000009591	-0.000002318		
5P1/2 -- (2)	6.878540	-47.376969	0.251872079	0.000000788	-0.000000346		
5P3/2 5P3/2			0.539263292	0.000017714		-0.000020289	0.000000605
6S1/2 6S1/2			0.496068201	0.000002678	-0.000000008		
5P3/2 -- (4)	5.942603	-44.433035	0.251195772	0.000001492	-0.000000218		
6S1/2 6S1/2			0.491837254	0.000009889		-0.0000001947	0.000000131
6S1/2 -- (2)	0.924446	-16.813253	0.249361032	0.000001718	-0.000000250		
ETOT	-9617.79170	10371.87394	0.199978296	0.000000395		-0.000036834	0.000000722
			3515.74406	9.276449247	-0.971458652	-0.974615701	0.020061290

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM	4F5	Z=61 A=145 R=1.19136E-04 A.U.					
1S1/2 -- (2)	2146.193554	-4108.792441	40.788904611	3.127342917		-0.449884864	0.009623666
2S1/2			12.415849977	0.156873563	-0.018175160		
2P1/2			14.824741952	0.325205169	-0.047281611		
2P3/2			13.541313277	0.160473646	-0.046405458		
3S1/2			5.073315728	0.031830335	-0.003942331		
3P1/2			5.480981014	0.061044640	-0.008879399		
3P3/2			5.137826870	0.031006762	-0.009238738		
3D3/2			5.162220090	0.001338561	-0.000168939		
3D5/2			5.056826790	0.000543631	-0.000174498		
4S1/2			2.247040225	0.007453268	-0.000935454		
4P1/2			2.259735890	0.013302861	-0.001935337		
4P3/2			2.134138774	0.006724412	-0.002015430		
4D3/2			1.946385088	0.000287757	-0.000036465		
4D5/2			1.910972363	0.000116255	-0.000037601		
4F5/2			1.300617138	0.000000283	-0.000000033		
5S1/2			0.895855644	0.001248781	-0.000157170		
5P1/2			0.800633329	0.001804302	-0.000262504		
5P3/2			0.750744913	0.000879347	-0.000263846		
6S1/2			0.281533602	0.000106069	-0.000013355		
2S1/2 -- (2)	480.257547	-974.569709	9.187418408	0.054508551		-0.055683662	0.001142888
2P1/2			9.016860095	0.016726978	-0.000047647		
2P3/2			8.688880655	0.027594177	-0.000310747		
3S1/2			4.295005559	0.006039806	-0.001478117		
3P1/2			4.622531407	0.009613629	-0.001517566		
3P3/2			4.429804833	0.008393550	-0.001085327		
3D3/2			4.845915352	0.006624505	-0.000919233		
3D5/2			4.767178141	0.002950107	-0.000909082		
4S1/2			2.072947352	0.001403212	-0.000360386		
4P1/2			2.076742189	0.002175028	-0.000353622		
4P3/2			1.984525098	0.001846999	-0.000261017		
4D3/2			1.888220705	0.001074831	-0.000156620		
4D5/2			1.857984350	0.000497099	-0.000155666		
4F5/2			1.299886538	0.000026288	-0.000003479		
5S1/2			0.866933069	0.000234670	-0.000060767		
5P1/2			0.775907788	0.000296652	-0.000048460		
5P3/2			0.731266509	0.000241895	-0.000034684		
6S1/2			0.279079775	0.000019927	-0.000005166		
2P1/2 -- (2)	480.131181	-973.925787	11.072831720	0.123436046		-0.003211964	0.000100311
2P3/2			10.145394160	0.018964159	-0.000011760		
3S1/2			4.523585294	0.004137180	-0.000304482		
3P1/2			4.610193404	0.009303965	-0.001402710		
3P3/2			4.592788732	0.003958246	-0.000109379		
3D3/2			4.837681872	0.019892014	-0.004734096		
3D5/2			4.896758819	0.000656102	-0.000144221		
4S1/2			2.121038551	0.000953991	-0.000077516		
4P1/2			2.078759369	0.001957879	-0.000321612		
4P3/2			2.018331581	0.000853574	-0.000027521		
4D3/2			1.888129330	0.003392591	-0.000828721		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM 4F5	Z=61 A=145 R=1.19136E-04 A.U.						
4D5/2			1.880575629	0.000129468	-0.000026818		
4F5/2			1.300004803	0.000032036	-0.000006704		
5S1/2			0.874829057	0.000159305	-0.000013188		
5P1/2			0.776283667	0.000263857	-0.000043963		
5P3/2			0.735653892	0.000111479	-0.000003688		
6S1/2			0.279748612	0.000013525	-0.000001122		
2P3/2 -- (4)	404.426846	-871.754744	9.915475041	0.068425826		-0.000307242	0.000021643
3S1/2			4.472677485	0.005363373	-0.000353133		
3P1/2			4.736339023	0.003313855	-0.000139163		
3P3/2			4.448133860	0.007518314	-0.000671343		
3D3/2			4.933984019	0.005879191	-0.000592365		
3D5/2			4.770132719	0.009963991	-0.002827778		
4S1/2			2.109511317	0.001197691	-0.000086287		
4P1/2			2.100355108	0.000706639	-0.000034264		
4P3/2			1.990325246	0.001562178	-0.000153531		
4D3/2			1.903699399	0.001005185	-0.000102297		
4D5/2			1.859608344	0.001662652	-0.000484858		
4F5/2			1.300095329	0.000018414	-0.000001822		
5S1/2			0.872909644	0.000198781	-0.000014577		
5P1/2			0.779082796	0.000095473	-0.000004745		
5P3/2			0.732062120	0.000202721	-0.000020239		
6S1/2			0.279585717	0.000016862	-0.000001239		
3S1/2 -- (2)	145.237454	-353.478049	3.448606698	0.003096120		-0.011673337	0.000238183
3P1/2			3.141916364	0.001129254	-0.000028321		
3P3/2			3.059976701	0.001707150	-0.000083076		
3D3/2			3.461125868	0.001035551	-0.000033583		
3D5/2			3.435190117	0.001389252	-0.000037253		
4S1/2			1.832725329	0.000456055	-0.000162959		
4P1/2			1.843953588	0.000529310	-0.000093337		
4P3/2			1.770758547	0.000521608	-0.000062654		
4D3/2			1.699916815	0.000233182	-0.000022017		
4D5/2			1.677816788	0.000241334	-0.000020217		
4F5/2			1.272437736	0.000110853	-0.000015430		
5S1/2			0.828894945	0.000075973	-0.000028059		
5P1/2			0.745193316	0.000075176	-0.000013653		
5P3/2			0.704073134	0.000070374	-0.000009012		
6S1/2			0.275871050	0.000006446	-0.000002389		
3P1/2 -- (2)	142.192869	-348.522654	3.601707655	0.006031368		-0.000741439	0.000022968
3P3/2			3.336067457	0.000922890	-0.000001594		
3D3/2			3.360894078	0.002242233	-0.000141409		
3D5/2			3.577844863	0.001036091	-0.000005662		
4S1/2			1.882598572	0.000412276	-0.000050932		
4P1/2			1.812410439	0.000613154	-0.000140462		
4P3/2			1.791901490	0.000248977	-0.000012391		
4D3/2			1.704989619	0.000565923	-0.000084360		
4D5/2			1.690958150	0.000159499	-0.000005519		
4F5/2			1.268478773	0.000188111	-0.000041077		
5S1/2			0.836070585	0.000066691	-0.000008759		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM 4F5	Z=61 A=145 R=1.19136E-04 A.U.						
5P1/2			0.741812422	0.000081538	-0.000019657		
5P3/2			0.706621345	0.000032640	-0.000001812		
6S1/2			0.276469053	0.000005638	-0.000000746		
3P3/2 -- (4)	124.633534	-322.788135	3.311593224	0.003460981		-0.000072550	0.000005069
3D3/2			3.485259505	0.000795309	-0.000009518		
3D5/2			3.345469490	0.001933777	-0.000053230		
4S1/2			1.867710158	0.000548379	-0.000062641		
4P1/2			1.850234222	0.000239269	-0.000016247		
4P3/2			1.753509594	0.000496664	-0.000068431		
4D3/2			1.699704211	0.000186854	-0.000016543		
4D5/2			1.673353817	0.000448157	-0.000060783		
4F5/2			1.272527822	0.000096895	-0.000009791		
5S1/2			0.833708431	0.000086805	-0.000010403		
5P1/2			0.745913259	0.000032067	-0.000002413		
5P3/2			0.702150687	0.000063497	-0.000009287		
6S1/2			0.276269688	0.000007320	-0.000000883		
3D3/2 -- (4)	119.659464	-315.157308	3.745568071	0.005638714		-0.000000476	0.000000043
3D5/2			3.756930529	0.001061925	-0.000000016		
4S1/2			1.911537466	0.000229865	-0.000005362		
4P1/2			1.871813226	0.000427949	-0.000027570		
4P3/2			1.810781161	0.000169628	-0.000004169		
4D3/2			1.701819566	0.000516234	-0.000044836		
4D5/2			1.712417944	0.000170927	-0.000002241		
4F5/2			1.265435472	0.000415140	-0.000102289		
5S1/2			0.840531559	0.000037300	-0.000001096		
5P1/2			0.748925270	0.000054479	-0.000003722		
5P3/2			0.708977260	0.000021758	-0.000000616		
6S1/2			0.276843915	0.000003155	-0.000000095		
3D5/2 -- (6)	115.520940	-308.689723	3.699560733	0.004869772		-0.000000102	0.000000013
4S1/2			1.906604274	0.000275122	-0.000005378		
4P1/2			1.881879659	0.000187825	-0.000002547		
4P3/2			1.799269308	0.000340309	-0.000014113		
4D3/2			1.731010162	0.000139981	-0.000002366		
4D5/2			1.686321870	0.000478058	-0.000029431		
4F5/2			1.280001799	0.000085592	-0.000006467		
5S1/2			0.839742279	0.000043815	-0.000001098		
5P1/2			0.749999183	0.000024575	-0.000000431		
5P3/2			0.707620703	0.000042207	-0.000001902		
6S1/2			0.276777234	0.000003698	-0.000000095		
4S1/2 -- (2)	44.707557	-147.374228	1.512272697	0.000245572		-0.002753212	0.000056103
4P1/2			1.324509950	0.000130761	-0.000009950		
4P3/2			1.293186153	0.000147029	-0.000019547		
4D3/2			1.335863203	0.000111946	-0.000011011		
4D5/2			1.324617294	0.000096083	-0.000011501		
4F5/2			1.094742354	0.000054583	-0.000005860		
5S1/2			0.761363749	0.000028651	-0.000012264		
5P1/2			0.696066467	0.000018052	-0.000003609		
5P3/2			0.660047599	0.000017973	-0.000002623		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROMETHIUM 4F5	Z=61	A=145	R=1.19136E-04	A.U.			
4P1/2 -- 6S1/2 (2)	41.588188	-140.987282	0.270365672 1.476122213	0.000002436 0.000427954	-0.000001069 -0.0000000193	-0.000168378	0.000005207
4P3/2 4D3/2			1.366302506 1.239974447	0.000064219 0.000247270	-0.000042253 -0.000001568		
4D5/2 4F5/2			1.338808775 1.066878907	0.000058646 0.000086080	-0.000014031 -0.000005347		
5S1/2 5P1/2			0.769936394 0.684213651	0.000036768 0.000028962	-0.000007973 -0.000000689		
5P3/2 6S1/2			0.661520615 0.270990632	0.000011148 0.000003015	-0.000000453 -0.0000000000		
4P3/2 -- (4)	36.669937	-132.241729	1.359798164 1.313650221	0.000245390 0.000075263	-0.000003756 -0.000019162	-0.000016381	0.000001143
4D3/2 4D5/2			1.246558787 1.072092849	0.000155103 0.000041651	-0.000002919 -0.000006648		
4F5/2 5S1/2			0.764785424 0.693223356	0.000046549 0.000012041	-0.000000978 -0.000003703		
5P1/2 5P3/2			0.652426664 0.270580018	0.000022497 0.000003763	-0.000000552 -0.0000000000		
4D3/2 -- (4)	30.511243	-118.786146	1.274053149 1.278089927	0.000279263 0.000053638	-0.000000002 -0.000021786	-0.000000106	0.000000010
4D5/2 4F5/2			0.997308697 0.759041795	0.000126997 0.000016703	-0.00000508 -0.000003130		
5S1/2 5P1/2			0.682587418 0.653644710	0.000031037 0.000009136	-0.000000372 -0.000000051		
5P3/2 6S1/2			0.270144708 1.260390910	0.000001360 0.000240194	-0.000000051 -0.000001318	-0.000000023	0.000000003
4D5/2 -- (6)	29.434606	-116.617326	1.042666701 0.757029578	0.000032684 0.000020190	-0.000000495 -0.000000176		
4F5/2 5S1/2			0.686752458 0.650006681	0.000009871 0.000020766	-0.000001533 -0.000000050		
5P1/2 5P3/2			0.269990903 0.874454000	0.000001601 0.000113758	-0.000000000 -0.0000000000	-0.000000000	0.000000000
4F5/2 -- (5)	15.068038	-79.337699	0.685387193 0.622201802	0.000008063 0.000009412	-0.000000157 -0.000000175		
5S1/2 5P1/2			0.602358688 0.264315670	0.000004610 0.000000641	-0.000000030 -0.0000000000		
5P3/2 6S1/2			0.623776270 0.517671699	0.000014220 0.000013569	-0.000001766 -0.000002478	-0.000462010	0.000009412
5P1/2 5P3/2			0.502414030 0.255548371	0.000010228 0.000000821	-0.000000259 -0.000000359		
6S1/2 5P1/2			0.551468811 0.506618336	0.000018934 0.000002826	-0.000000009 -0.000000226	-0.000023019	0.000000712
5P3/2 6S1/2			0.254884730 0.501670624	0.000001547 0.000010482	-0.000000259 -0.0000001790	-0.000002158	0.000000150
5P1/2 -- (4)	6.171384	-46.065344	0.252955489 0.202595772	0.000001790 0.000000411	-0.000000259 -0.000000251	-0.000000251	0.000000800
6S1/2 -- (2)	0.946185	-17.320204					
ETOT	-10014.38584	10828.84219	-24516.92544	3665.93330	9.822517737	-1.030052017	-1.050878671
							0.022512826

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
1S1/2 -- (2)	2230.952333	-4262.332974	41.584903365	3.292617242		-0.483874121	0.010760127
2S1/2			12.674478887	0.165771597	-0.019241156		
2P1/2			15.148981443	0.343743569	-0.049809448		
2P3/2			13.791498370	0.169007241	-0.048873472		
3S1/2			5.188934285	0.033810706	-0.004195749		
3P1/2			5.612811074	0.064874335	-0.009401419		
3P3/2			5.249249972	0.032902420	-0.009804363		
3D3/2			5.279479412	0.001429367	-0.000179921		
3D5/2			5.167987612	0.000579929	-0.000186157		
4S1/2			2.302117702	0.007953115	-0.001000224		
4P1/2			2.318817805	0.014214811	-0.002060186		
4P3/2			2.185042293	0.007170966	-0.002149573		
4D3/2			1.998475946	0.000310364	-0.000039227		
4D5/2			1.960696269	0.000125223	-0.000040508		
4F5/2			1.356209627	0.000000327	-0.000000038		
5S1/2			0.915211516	0.001323660	-0.000166937		
5P1/2			0.818048454	0.001909418	-0.000276743		
5P3/2			0.764778602	0.000926094	-0.000277915		
6S1/2			0.285308930	0.000109942	-0.000013871		
2S1/2 -- (2)	501.052007	-1013.019435	9.375060272	0.057830884		-0.060321940	0.001286038
2P1/2			9.205876735	0.017739214	-0.000048938		
2P3/2			8.858561344	0.029130880	-0.000339447		
3S1/2			4.388830634	0.006441838	-0.001576708		
3P1/2			4.727871963	0.010294039	-0.001624396		
3P3/2			4.524260761	0.008901187	-0.001148553		
3D3/2			4.954496499	0.007061465	-0.000979588		
3D5/2			4.871291249	0.003142216	-0.000968687		
4S1/2			2.122333003	0.001503355	-0.000386215		
4P1/2			2.129107870	0.002341522	-0.000380570		
4P3/2			2.031102477	0.001969206	-0.000277968		
4D3/2			1.938190288	0.001153772	-0.000168173		
4D5/2			1.905965919	0.000533423	-0.000167139		
4F5/2			1.355404066	0.000030091	-0.000003983		
5S1/2			0.885542023	0.000249740	-0.000064689		
5P1/2			0.792661425	0.000316277	-0.000051650		
5P3/2			0.744986266	0.000254709	-0.000036484		
6S1/2			0.282847376	0.000020738	-0.000005377		
2P1/2 -- (2)	500.887857	-1012.340616	11.309146881	0.131003019		-0.003619762	0.000117122
2P3/2			10.346384631	0.019985493	-0.000013334		
3S1/2			4.624245494	0.004410064	-0.000324237		
3P1/2			4.715756851	0.009935306	-0.001498848		
3P3/2			4.692005352	0.004204897	-0.000116141		
3D3/2			4.946702884	0.021204188	-0.005046775		
3D5/2			5.004396422	0.000697750	-0.000153625		
4S1/2			2.172078671	0.001021612	-0.000382979		
4P1/2			2.131346994	0.002101978	-0.000345647		
4P3/2			2.066060267	0.000911371	-0.000029399		
4D3/2			1.938221942	0.003644982	-0.000890693		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
4D5/2			1.929357492	0.000138933	-0.000028812		
4F5/2			1.355536647	0.000036615	-0.000007666		
5S1/2			0.893654985	0.000169462	-0.000014026		
5P1/2			0.793067581	0.000280541	-0.000046796		
5P3/2			0.749466554	0.000117551	-0.000003891		
6S1/2			0.283519412	0.000014069	-0.000001167		
2P3/2 -- (4)	419.289561	-902.365904	10.098011193	0.072150443		-0.000339049	0.000024755
3S1/2			4.569982015	0.005706731	-0.000378093		
3P1/2			4.843087008	0.003527999	-0.000148895		
3P3/2			4.541530793	0.007979669	-0.000714244		
3D3/2			5.043966163	0.006268368	-0.000630825		
3D5/2			4.873166534	0.010613783	-0.003012467		
4S1/2			2.159735425	0.001279369	-0.000092719		
4P1/2			2.153134414	0.000756291	-0.000036867		
4P3/2			2.036770057	0.001665442	-0.000164146		
4D3/2			1.954046314	0.001079222	-0.000109708		
4D5/2			1.907463765	0.001782871	-0.000520140		
4F5/2			1.355630361	0.000021163	-0.000002093		
5S1/2			0.891613364	0.000210897	-0.000015556		
5P1/2			0.795860683	0.000101193	-0.000005056		
5P3/2			0.745756424	0.000213418	-0.000021369		
6S1/2			0.283349976	0.000017494	-0.000001293		
3S1/2 -- (2)	152.192554	-368.010850	3.524466767	0.003310732		-0.012720178	0.000269561
3P1/2			3.212915906	0.001202676	-0.000029282		
3P3/2			3.126263242	0.001818414	-0.000089787		
3D3/2			3.538885873	0.001104075	-0.000035374		
3D5/2			3.511482498	0.001482603	-0.000039418		
4S1/2			1.875761419	0.000490209	-0.000175233		
4P1/2			1.889492814	0.000574562	-0.000101295		
4P3/2			1.811807056	0.000557490	-0.000067053		
4D3/2			1.744131894	0.000253103	-0.000023996		
4D5/2			1.720622768	0.000260097	-0.000021971		
4F5/2			1.325639103	0.000124796	-0.000017379		
5S1/2			0.846756413	0.000081117	-0.000029967		
5P1/2			0.761349117	0.000080779	-0.000014665		
5P3/2			0.717434986	0.000074295	-0.000009525		
6S1/2			0.279647665	0.000006731	-0.000002495		
3P1/2 -- (2)	149.092488	-363.000928	3.684562124	0.006457692		-0.000841617	0.000027004
3P3/2			3.409870564	0.000979180	-0.000001830		
3D3/2			3.438348569	0.002393716	-0.000150140		
3D5/2			3.659058896	0.001106736	-0.000006047		
4S1/2			1.927279051	0.000441626	-0.000054556		
4P1/2			1.857325148	0.000660747	-0.000151614		
4P3/2			1.833784867	0.000265953	-0.000013290		
4D3/2			1.749646847	0.000613835	-0.000091841		
4D5/2			1.734404165	0.000171722	-0.000005977		
4F5/2			1.321478924	0.000211791	-0.000046268		
5S1/2			0.854123917	0.000070992	-0.000009325		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.							
5P1/2			0.757942294	0.000087024	-0.000021011		
5P3/2			0.720052544	0.000034444	-0.0000301919		
6S1/2			0.280248274	0.000005870	-0.000000777		
3P3/2 -- (4)	130.082121	-335.232629	3.382013156	0.003687189		-0.000080729	0.000005845
3D3/2			3.562026021	0.000845861	-0.000009790		
3D5/2			3.418632698	0.002059657	-0.000055281		
4S1/2			1.911463501	0.000589183	-0.000067579		
4P1/2			1.895679012	0.000257575	-0.000017586		
4P3/2			1.793923742	0.000532101	-0.000073526		
4D3/2			1.743710402	0.000203365	-0.000018095		
4D5/2			1.715823000	0.000485410	-0.000066448		
4F5/2			1.325679238	0.000109069	-0.000011019		
5S1/2			0.851631046	0.000092607	-0.000011142		
5P1/2			0.762047916	0.000034181	-0.000002585		
5P3/2			0.715463247	0.000067182	-0.000009852		
6S1/2			0.280042508	0.000007637	-0.000000924		
3D3/2 -- (4)	125.081985	-327.603408	3.831813354	0.006026190		-0.000000554	0.000000051
3D5/2			3.842370583	0.001134386	-0.000000018		
4S1/2			1.956959134	0.000246432	-0.000005781		
4P1/2			1.918431731	0.000459854	-0.000029732		
4P3/2			1.853126322	0.000181611	-0.000004474		
4D3/2			1.746464531	0.000555891	-0.000048623		
4D5/2			1.756530808	0.000184048	-0.000002430		
4F5/2			1.318291209	0.000467905	-0.000115316		
5S1/2			0.858666997	0.000039726	-0.000001173		
5P1/2			0.765186662	0.000057976	-0.000003977		
5P3/2			0.722435385	0.000023011	-0.000000653		
6S1/2			0.280621625	0.000003286	-0.000000100		
3D5/2 -- (6)	120.616813	-320.648990	3.782599744	0.005197805		-0.000000118	0.000000016
4S1/2			1.951724586	0.000294719	-0.000005799		
4P1/2			1.928561781	0.000201705	-0.000002755		
4P3/2			1.841182397	0.000363934	-0.000015102		
4D3/2			1.776316465	0.000150730	-0.000002570		
4D5/2			1.729563337	0.000513793	-0.000031869		
4F5/2			1.333913787	0.000096559	-0.000007289		
5S1/2			0.857834782	0.000046625	-0.000001175		
5P1/2			0.766252070	0.000026136	-0.000000462		
5P3/2			0.721043454	0.000044585	-0.000002012		
6S1/2			0.280552865	0.000003849	-0.000000100		
4S1/2 -- (2)	47.033825	-153.623465	1.548092724	0.000264189		-0.003014400	0.000063795
4P1/2			1.356846645	0.000139338	-0.000010434		
4P3/2			1.323577569	0.000157897	-0.000021108		
4D3/2			1.369647478	0.000119973	-0.000011719		
4D5/2			1.357702993	0.000103560	-0.000012269		
4F5/2			1.136284730	0.000059968	-0.000006372		
5S1/2			0.778092623	0.000030626	-0.000013094		
5P1/2			0.711442583	0.000019450	-0.000003880		
5P3/2			0.672958727	0.000018986	-0.000002777		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
SAMARIUM 4F6 Z=62 A=152 R=1.21288E-04 A.U.								
4P1/2 -- (2)	43.825215	-147.112785	0.274171012 1.513028644	0.000002547 0.000461739	-0.000001116	-0.000192299	0.000006159	
4P3/2			1.399247538	0.000068494	-0.000000223			
4D3/2			1.272054634	0.000265660	-0.000045199			
4D5/2			1.373002229	0.000063338	-0.000001683			
4F5/2			1.107525793	0.000094632	-0.000015261			
5S1/2			0.786964163	0.000039063	-0.000005676			
5P1/2			0.699468487	0.000030979	-0.000008521			
5P3/2			0.674543863	0.000011753	-0.000000728			
6S1/2			0.274805826	0.000003135	-0.000000471			
4P3/2 -- (4)	38.456248	-137.630466	1.391407273	0.000263252		-0.000018326	0.000001324	
4D3/2			1.343402220	0.000080345	-0.000003944			
4D5/2			1.277372411	0.000166349	-0.000020220			
4F5/2			1.112082672	0.000045610	-0.000003150			
5S1/2			0.781529844	0.000049785	-0.000007117			
5P1/2			0.708489960	0.000012876	-0.000001049			
5P3/2			0.665220683	0.000023855	-0.000003923			
6S1/2			0.274381879	0.000003938	-0.000000578			
4D3/2 -- (4)	32.152414	-123.965767	1.307893537	0.000302085		-0.000000125	0.000000012	
4D5/2			1.311651820	0.000057916	-0.000000002			
4F5/2			1.035163983	0.000138992	-0.000023527			
5S1/2			0.776104762	0.000017851	-0.000000545			
5P1/2			0.697987067	0.000033130	-0.000003341			
5P3/2			0.666723761	0.000009678	-0.000000393			
6S1/2			0.273979983	0.000001422	-0.000000053			
4D5/2 -- (6)	30.975662	-121.613927	1.293125151	0.000259380		-0.000000026	0.000000004	
4F5/2			1.082143742	0.000035877	-0.000001419			
5S1/2			0.773986159	0.000021561	-0.000000532			
5P1/2			0.702145353	0.000010545	-0.000000188			
5P3/2			0.663013438	0.000021984	-0.000001617			
6S1/2			0.273821329	0.000001674	-0.000000052			
4F5/2 -- (6)	16.318072	-84.085058	0.914979889	0.000129063		-0.000000030	0.000000000	
5S1/2			0.705471427	0.000008734	-0.000000157			
5P1/2			0.640147389	0.000010182	-0.000000171			
5P3/2			0.617953489	0.000004964	-0.000000028			
6S1/2			0.268568639	0.000000681	-0.000000003			
5S1/2 -- (2)	9.705959	-58.556030	0.637246676	0.000015157		-0.0000502495	0.000010631	
5P1/2			0.528878924	0.000014358	-0.000001863			
5P3/2			0.512553350	0.000010881	-0.000002645			
6S1/2			0.259322654	0.000000854	-0.000000371			
5P1/2 -- (2)	7.508416	-51.169987	0.563441203	0.000020182		-0.000026039	0.000000834	
5P3/2			0.516894768	0.000002972	-0.000000011			
6S1/2			0.258668053	0.000001601	-0.000000233			
5P3/2 -- (4)	6.394946	-47.695596	0.511182351	0.000011076		-0.000002385	0.000000172	
6S1/2			0.256638111	0.000001862	-0.000000269			
6S1/2 -- (2)	0.966489	-17.839734	0.205449986	0.000000427		-0.0000041746	0.000000883	
ETOT	-10421.08088	11299.72667	-25550.07654	3821.07551	10.391413487	-1.091072370	-1.132074733	0.025213065

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
1S1/2 -- (2)	2318.201989	-4419.779638	42.388331630	3.464116274		-0.520082917	0.012008233
2S1/2			12.935791366	0.175042040	-0.020354287		
2P1/2			15.477280981	0.363046592	-0.052425569		
2P3/2			14.042422285	0.177836583	-0.051426866		
3S1/2			5.305518938	0.035879088	-0.004461032		
3P1/2			5.745889361	0.068869730	-0.009942383		
3P3/2			5.360970553	0.034874882	-0.010392936		
3D3/2			5.396956949	0.001523882	-0.000191294		
3D5/2			5.279121934	0.000617652	-0.000198271		
4S1/2			2.357403100	0.008475089	-0.001068027		
4P1/2			2.378148172	0.015166297	-0.002189541		
4P3/2			2.235798177	0.007635134	-0.002289017		
4D3/2			2.050331113	0.000333940	-0.000042093		
4D5/2			2.010082595	0.000134555	-0.000043532		
4F5/2			1.410474186	0.000000374	-0.000000043		
4F7/2			1.387547314	0.000000140	-0.000000046		
5S1/2			0.934538219	0.001401243	-0.000177083		
5P1/2			0.835447165	0.002018051	-0.000291346		
5P3/2			0.778667177	0.000973992	-0.000292331		
6S1/2			0.288956787	0.000114068	-0.000014421		
2S1/2 -- (2)	522.532759	-1052.536256	9.564404366	0.061310918		-0.065305114	0.001444431
2P1/2			9.396794878	0.018799288	-0.000050254		
2P3/2			9.029232514	0.030727229	-0.000370786		
3S1/2			4.483315799	0.006863986	-0.001680159		
3P1/2			4.834004057	0.011010169	-0.001736718		
3P3/2			4.619015902	0.009427444	-0.001213690		
3D3/2			5.063342450	0.007517470	-0.001042532		
3D5/2			4.975485064	0.003342309	-0.001030838		
4S1/2			2.171873054	0.001608508	-0.000413323		
4P1/2			2.181634700	0.002516828	-0.000408911		
4P3/2			2.077565183	0.002095898	-0.000295457		
4D3/2			1.987943793	0.001236140	-0.000180223		
4D5/2			1.953644817	0.000571247	-0.000179101		
4F5/2			1.409592806	0.000034162	-0.000004522		
4F7/2			1.386730988	0.000012377	-0.000004367		
5S1/2			0.904121962	0.000265444	-0.000068774		
5P1/2			0.809396129	0.000336749	-0.000054972		
5P3/2			0.758571672	0.000267799	-0.000038313		
6S1/2			0.286483509	0.000021603	-0.000005603		
2P1/2 -- (2)	522.320310	-1051.811134	11.547968484	0.138930707		-0.004074342	0.000136441
2P3/2			10.548595066	0.021042462	-0.000015090		
3S1/2			4.725681695	0.004896531	-0.000344922		
3P1/2			4.822120594	0.010598925	-0.001599811		
3P3/2			4.791568125	0.004461736	-0.000123165		
3D3/2			5.056015660	0.022572341	-0.005372787		
3D5/2			5.112085857	0.000740923	-0.000163413		
4S1/2			2.223294559	0.001092608	-0.000088703		
4P1/2			2.184100993	0.002253502	-0.000370907		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
			2.113678132	0.000971518	-0.000031349		
			1.988104702	0.003908295	-0.000955357		
			1.977826601	0.000148750	-0.000030888		
			1.409740187	0.000041506	-0.000008692		
			1.387151173	0.000002334	-0.000000879		
			0.912452774	0.000180046	-0.000014896		
			0.899832753	0.000297928	-0.000049746		
			0.763143328	0.000123780	-0.000004099		
			0.287159863	0.000014650	-0.000001215		
2P3/2 -- (4)	434.449148	-933.544282	10.280924189	0.076010214		-0.000373552	0.000028250
			4.667887386	0.006066281	-0.000404466		
			4.950493559	0.003752022	-0.000159131		
			4.635097588	0.008459702	-0.000758971		
			5.154107416	0.006674273	-0.000670859		
			4.976173792	0.011290608	-0.003204852		
			2.210092735	0.001364812	-0.000099500		
			2.206040085	0.000808228	-0.000039605		
			2.083069039	0.001772718	-0.000175201		
			2.004152867	0.001156337	-0.000117411		
			1.954995462	0.001907872	-0.000556837		
			1.409835918	0.000024126	-0.000002386		
			1.386768767	0.000021031	-0.000006749		
			0.910283505	0.000223472	-0.000016581		
			0.812615002	0.000107122	-0.000005381		
			0.759313076	0.000224371	-0.000022529		
			0.286983417	0.000018168	-0.000001351		
3S1/2 -- (2)	159.376504	-382.928547	3.600814913	0.003536454		-0.013849152	0.000304442
			3.284394626	0.001279744	-0.000030261		
			3.192817159	0.001934654	-0.000097049		
			3.616953770	0.001175886	-0.000037266		
			3.588018248	0.001580225	-0.000041716		
			1.918932321	0.000526140	-0.000188133		
			1.935166203	0.000622477	-0.000109712		
			1.852777945	0.000594573	-0.000071597		
			1.788189567	0.000273981	-0.000026071		
			1.763209349	0.000279702	-0.000023802		
			1.377529391	0.000139520	-0.000019437		
			1.356304428	0.000061789	-0.000018832		
			0.864594037	0.000086488	-0.000031957		
			0.777489341	0.000086651	-0.000015723		
			0.730674071	0.000078286	-0.000010046		
			0.283287242	0.000007033	-0.000002608		
3P1/2 -- (2)	156.218091	-377.860708	3.767973469	0.006906372		-0.000953897	0.000031667
			3.483976733	0.001037499	-0.000002096		
			3.516095401	0.002552782	-0.000159446		
			3.740538285	0.001180589	-0.000006458		
			1.972106850	0.000472418	-0.000058351		
			1.902373882	0.000710903	-0.000163361		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
4P3/2			1.875594979	0.000283558	-0.000014226		
4D3/2			1.794150989	0.000663884	-0.000099649		
4D5/2			1.777631205	0.000184513	-0.000006455		
4F5/2			1.373182954	0.000236806	-0.000051754		
4F7/2			1.362348158	0.000024994	-0.000005431		
5S1/2			0.872153243	0.000075472	-0.000009914		
5P1/2			0.774056497	0.000092752	-0.000022424		
5P3/2			0.733359994	0.000036287	-0.000002029		
6S1/2			0.283891384	0.000006117	-0.000000809		
3P3/2 -- (4)	135.657910	-347.926420	3.452543276	0.003923270		-0.000089663	0.000006722
3D3/2			3.638890941	0.000898580	-0.000010064		
3D5/2			3.491835772	0.002190925	-0.000057398		
4S1/2			1.955320664	0.000632171	-0.000072810		
4P1/2			1.941219239	0.000276842	-0.000019002		
4P3/2			1.834233462	0.000569077	-0.000078849		
4D3/2			1.787526252	0.000220763	-0.000019733		
4D5/2			1.758041964	0.000524427	-0.000072408		
4F5/2			1.377502780	0.000121924	-0.000012316		
4F7/2			1.350524569	0.000114462	-0.000034535		
5S1/2			0.869524501	0.000098669	-0.000011917		
5P1/2			0.778162597	0.000036384	-0.000002765		
5P3/2			0.728650626	0.000070973	-0.000010434		
6S1/2			0.283678708	0.000007975	-0.000000969		
3D3/2 -- (4)	130.632181	-340.298129	3.918154663	0.006431159		-0.000000644	0.000000062
3D5/2			3.927833960	0.001209370	-0.000000021		
4S1/2			2.002488487	0.000263798	-0.000006221		
4P1/2			1.965151160	0.000493388	-0.000032017		
4P3/2			1.895359019	0.000194106	-0.000004791		
4D3/2			1.790923493	0.000597349	-0.000052598		
4D5/2			1.800386055	0.000197742	-0.000002628		
4F5/2			1.369847172	0.000523744	-0.0000129104		
4F7/2			1.366821630	0.000016260	-0.000002051		
5S1/2			0.876771310	0.000042249	-0.000001254		
5P1/2			0.781426830	0.000061617	-0.000004243		
5P3/2			0.735764436	0.000024299	-0.000000692		
6S1/2			0.284263367	0.000003426	-0.000000104		
3D5/2 -- (6)	125.820892	-332.829056	3.865591344	0.005539928		-0.000000136	0.000000019
4S1/2			1.996939190	0.000315238	-0.000006241		
4P1/2			1.975331754	0.000216254	-0.000002975		
4P3/2			1.882973403	0.000388540	-0.000016133		
4D3/2			1.821418183	0.000161957	-0.000002784		
4D5/2			1.772543421	0.000551032	-0.000034422		
4F5/2			1.386505744	0.000108174	-0.000008158		
4F7/2			1.352416089	0.000324866	-0.000090220		
5S1/2			0.875894579	0.000049543	-0.000001256		
5P1/2			0.782482317	0.000027756	-0.000000494		
5P3/2			0.734336677	0.000047028	-0.000002125		
6S1/2			0.284192365	0.000004008	-0.000000105		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
4S1/2 -- (2)	49.430186	-160.019057	1.584002124	0.000283770		-0.003296381	0.000072364
4P1/2			1.389262633	0.000148305	-0.000010934		
4P3/2			1.353957745	0.000169311	-0.000022783		
4D3/2			1.403365810	0.000128389	-0.000012462		
4D5/2			1.390691073	0.000111377	-0.000013077		
4F5/2			1.176782539	0.000065571	-0.000006899		
4F7/2			1.162452357	0.000054709	-0.000006819		
5S1/2			0.794801013	0.000032685	-0.000013958		
5P1/2			0.726804145	0.000020917	-0.000004163		
5P3/2			0.685758611	0.000020012	-0.000002935		
6S1/2			0.277828948	0.000002664	-0.000001166		
4P1/2 -- (2)	46.130436	-153.381723	1.550019690	0.000497331		-0.000219193	0.000007263
4P3/2			1.432174646	0.000072907	-0.000000258		
4D3/2			1.304082077	0.000285027	-0.000048315		
4D5/2			1.407099434	0.000068234	-0.000001804		
4F5/2			1.147204895	0.000103552	-0.000016532		
4F7/2			1.162023438	0.000036375	-0.000001829		
5S1/2			0.803969081	0.000041443	-0.000006015		
5P1/2			0.714707753	0.000033083	-0.000009091		
5P3/2			0.687454809	0.000012368	-0.000000768		
6S1/2			0.278474076	0.000003263	-0.000000493		
4P3/2 -- (4)	40.278390	-143.113350	1.422912046	0.000281881		-0.000020455	0.000001531
4D3/2			1.376008286	0.000085630	-0.0000004137		
4D5/2			1.308022409	0.000178076	-0.000021316		
4F5/2			1.150996617	0.000049709	-0.000003386		
4F7/2			1.123233851	0.000070393	-0.000009610		
5S1/2			0.798238800	0.000053174	-0.000007609		
5P1/2			0.723731910	0.000013748	-0.000001123		
5P3/2			0.677898772	0.000025251	-0.000004149		
6S1/2			0.278035635	0.000004124	-0.000000606		
4D3/2 -- (4)	33.828374	-129.234816	1.341568075	0.000325981		-0.000000147	0.000000014
4D5/2			1.345018441	0.000062380	-0.000000002		
4F5/2			1.072114749	0.000151454	-0.000025312		
4F7/2			1.117594917	0.000030340	-0.000000433		
5S1/2			0.793117617	0.000019044	-0.000000583		
5P1/2			0.713348520	0.000035312	-0.000003560		
5P3/2			0.679675016	0.000010233	-0.000000413		
6S1/2			0.277664127	0.000001488	-0.000000056		
4D5/2 -- (6)	32.544916	-126.688747	1.325639476	0.000279408		-0.000000031	0.000000004
4F5/2			1.120610799	0.000039195	-0.000001523		
4F7/2			1.069571415	0.000115691	-0.000017146		
5S1/2			0.790888060	0.000022987	-0.000000569		
5P1/2			0.717500246	0.000011245	-0.000000201		
5P3/2			0.675889931	0.000023234	-0.000001702		
6S1/2			0.277500241	0.000001751	-0.000000055		
4F5/2 -- (6)	17.589398	-88.859942	0.954409504	0.000145272		-0.000000000	0.000000000
4F7/2			0.959520757	0.000021907	-0.000000000		
5S1/2			0.725062660	0.000009430	-0.000000157		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EUROPIUM 4F7 Z=63 A=153 R=1.21288E-04 A.U.							
5P1/2			0.657681019	0.000010981	-0.000000167		
5P3/2			0.633070236	0.000005327	-0.000000027		
6S1/2			0.272599182	0.000000723	-0.000000000		
4F7/2 -- (1)	17.106446	-87.415543	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.720295216	0.000011977	-0.000000166		
5P1/2			0.662373930	0.000007124	-0.000000021		
5P3/2			0.625807028	0.000009770	-0.000000085		
6S1/2			0.272146767	0.000000890	-0.000000000		
5S1/2 -- (2)	10.129123	-60.777881	0.650693310	0.000016133		-0.000545905	0.000011980
5P1/2			0.540071191	0.000015177	-0.000001964		
5P3/2			0.522637203	0.000011564	-0.000002820		
6S1/2			0.262928871	0.000000889	-0.000000385		
5P1/2 -- (2)	7.829730	-53.108309	0.575402132	0.000021481		-0.000029405	0.000000974
5P3/2			0.527118371	0.000003120	-0.000000012		
6S1/2			0.262283034	0.000001658	-0.000000240		
5P3/2 -- (4)	6.619478	-49.344768	0.520609609	0.000011686		-0.000002630	0.000000197
6S1/2			0.260149302	0.000001938	-0.000000279		
6S1/2 -- (2)	0.987203	-18.359109	0.208022196	0.000000443		-0.000044449	0.000000975
ETOT	-10837.95253	11785.01226	-26612.65380	3981.05227	10.981886314	-1.154590735	-1.218750868
							0.028184785
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
1S1/2 -- (2)	2407.934793	-4581.127361	43.198978513	3.641893910		-0.558535545	0.013376633
2S1/2			13.199479289	0.184681546	-0.021514493		
2P1/2			15.809356546	0.383113579	-0.055128171		
2P3/2			14.293687186	0.186953210	-0.054063192		
3S1/2			5.422612287	0.038029678	-0.004737521		
3P1/2			5.879600392	0.073017184	-0.010499809		
3P3/2			5.472426667	0.036916884	-0.011002139		
3D3/2			5.513816216	0.001621189	-0.000202940		
3D5/2			5.389424288	0.000656419	-0.000210719		
4S1/2			2.415567127	0.009041687	-0.001141722		
4P1/2			2.441364406	0.016209077	-0.002330729		
4P3/2			2.290613718	0.008149396	-0.002443481		
4D3/2			2.109048986	0.000361105	-0.000045391		
4D5/2			2.066517211	0.000145377	-0.000047039		
4F5/2			1.526752726	0.000000462	-0.000000053		
4F7/2			1.507494264	0.000000173	-0.000000057		
5S1/2			0.969594239	0.001543035	-0.000195404		
5P1/2			0.874430074	0.002264675	-0.000325639		
5P3/2			0.814742747	0.001095959	-0.000328985		
5D3/2			0.471203690	0.000016898	-0.000002125		
6S1/2			0.308958157	0.000136118	-0.000017244		
2S1/2 -- (2)	544.679946	-1093.101576	9.755185252	0.064947813		-0.070639376	0.001619319

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
2P1/2			9.589362835	0.019907434	-0.000051611		
2P3/2			9.200606265	0.032381721	-0.000405019		
3S1/2			4.578128973	0.007305141	-0.001788127		
3P1/2			4.940485208	0.011759445	-0.001854081		
3P3/2			4.713648306	0.009969385	-0.001280231		
3D3/2			5.171757628	0.007989663	-0.001107659		
3D5/2			5.079081855	0.003548982	-0.001099123		
4S1/2			2.223761904	0.001722960	-0.000442803		
4P1/2			2.237308391	0.002709573	-0.000440039		
4P3/2			2.127468452	0.002235803	-0.000314696		
4D3/2			2.044104578	0.001331657	-0.000194190		
4D5/2			2.007949005	0.000615358	-0.000193063		
4F5/2			1.525713799	0.000041757	-0.000005528		
4F7/2			1.506527915	0.000015212	-0.000005370		
5S1/2			0.937139649	0.000293472	-0.000076056		
5P1/2			0.846026451	0.000380691	-0.000062124		
5P3/2			0.792901949	0.000301190	-0.000043040		
5D3/2			0.468226034	0.000059977	-0.000008807		
6S1/2			0.306098570	0.000025881	-0.000006715		
2P1/2 -- (2)	544.422378	-1092.334443	11.789001281	0.147221632		-0.004579827	0.000158590
2P3/2			10.751693797	0.022133605	-0.000017044		
3S1/2			4.827528499	0.004995946	-0.000366459		
3P1/2			4.928836573	0.011293158	-0.001705192		
3P3/2			4.891022724	0.004727711	-0.000130408		
3D3/2			5.164922546	0.023986944	-0.005709845		
3D5/2			5.219092986	0.000785225	-0.000173511		
4S1/2			2.277012733	0.001169919	-0.000094920		
4P1/2			2.240015654	0.002420263	-0.000398657		
4P3/2			2.164889632	0.001038125	-0.000033505		
4D3/2			2.044403119	0.004213236	-0.001030230		
4D5/2			2.033107072	0.000160161	-0.000033307		
4F5/2			1.525890204	0.0000050659	-0.000010613		
4F7/2			1.507026584	0.000002865	-0.000001080		
5S1/2			0.946042403	0.000198985	-0.000016458		
5P1/2			0.846524944	0.000335942	-0.000056151		
5P3/2			0.797895277	0.000139438	-0.000004621		
5D3/2			0.468249043	0.000191146	-0.000046905		
6S1/2			0.306881687	0.000017545	-0.000001455		
2P3/2 -- (4)	449.881007	-965.263339	10.463853285	0.080000373		-0.000410897	0.000032163
3S1/2			4.766028754	0.006441159	-0.000432201		
3P1/2			5.058082872	0.003985144	-0.000169830		
3P3/2			4.728399488	0.008956551	-0.000805290		
3D3/2			5.263668777	0.007094130	-0.000712184		
3D5/2			5.078467037	0.011989716	-0.003403578		
4S1/2			2.262872646	0.001457643	-0.000106901		
4P1/2			2.262134337	0.000865200	-0.000042614		
4P3/2			2.132797583	0.001891480	-0.000187429		
4D3/2			2.060762906	0.001245597	-0.000126324		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4D5/2			2.009139868	0.002053588	-0.000599610		
4F5/2			1.525994826	0.000029617	-0.000002928		
4F7/2			1.506566250	0.000025954	-0.000008333		
5S1/2			0.943644315	0.000246297	-0.000018386		
5P1/2			0.849463858	0.000120398	-0.000006081		
5P3/2			0.793662575	0.000252328	-0.000025410		
5D3/2			0.468984843	0.000056524	-0.000005741		
6S1/2			0.306670324	0.000021697	-0.000001624		
3S1/2 -- (2)	166.760199	-398.196539	3.677372353	0.003772559		-0.015060142	0.000343076
3P1/2			3.356058272	0.001360309	-0.000031273		
3P3/2			3.259356474	0.002055398	-0.000104914		
3D3/2			3.694915169	0.001250759	-0.000039286		
3D5/2			3.664388386	0.001681608	-0.000044177		
4S1/2			1.963792856	0.000565231	-0.000202179		
4P1/2			1.983143948	0.000675222	-0.000118979		
4P3/2			1.896301307	0.000635325	-0.000076598		
4D3/2			1.837190030	0.000297991	-0.000028457		
4D5/2			1.810956927	0.000302481	-0.000025919		
4F5/2			1.488513930	0.000167707	-0.000023383		
4F7/2			1.471047341	0.000074932	-0.000022793		
5S1/2			0.895225119	0.000095894	-0.000035449		
5P1/2			0.811488070	0.000098700	-0.000017909		
5P3/2			0.762668453	0.000088244	-0.000011346		
5D3/2			0.458963855	0.000014243	-0.000001447		
6S1/2			0.302427216	0.000008450	-0.000003135		
3P1/2 -- (2)	163.538641	-393.064069	3.851572682	0.007375781		-0.001079186	0.000037035
3P3/2			3.558045515	0.001097506	-0.000002395		
3D3/2			3.593668441	0.002719020	-0.000169449		
3D5/2			3.821816542	0.001257205	-0.000006901		
4S1/2			2.018754595	0.000505912	-0.000062484		
4P1/2			1.949630539	0.000766004	-0.000176281		
4P3/2			1.920046893	0.000302967	-0.000015265		
4D3/2			1.843646604	0.000721310	-0.000108592		
4D5/2			1.826131647	0.000199402	-0.000007011		
4F5/2			1.483628717	0.000284704	-0.000062271		
4F7/2			1.478157373	0.000030418	-0.000006578		
5S1/2			0.903283079	0.000083425	-0.000010966		
5P1/2			0.807824420	0.000104913	-0.000025413		
5P3/2			0.765613271	0.000040887	-0.000032298		
5D3/2			0.459277814	0.000034736	-0.000005524		
6S1/2			0.303124383	0.000007325	-0.000000970		
3P3/2 -- (4)	141.331096	-360.831887	3.522853318	0.004168115		-0.000099379	0.000007709
3D3/2			3.715405721	0.000953247	-0.000010349		
3D5/2			3.564638613	0.002326865	-0.000059626		
4S1/2			2.000911313	0.000679010	-0.000078546		
4P1/2			1.989035857	0.000298004	-0.000020565		
4P3/2			1.876995766	0.000609930	-0.000084748		
4D3/2			1.836240242	0.000240806	-0.000021621		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4D5/2			1.805344952	0.000569610	-0.000079298		
4F5/2			1.488394248	0.000146518	-0.000014804		
4F7/2			1.464253335	0.000138545	-0.000041756		
5S1/2			0.900399955	0.000109278	-0.000013258		
5P1/2			0.812169271	0.000041107	-0.000003144		
5P3/2			0.760448600	0.000080162	-0.000011826		
5D3/2			0.458925850	0.000011410	-0.000001075		
6S1/2			0.302871705	0.000009567	-0.000001168		
3D3/2 -- (4)	136.269677	-353.188413	4.003965762	0.006850827		-0.000000746	0.000000074
3D5/2			4.012698409	0.001287222	-0.000000024		
4S1/2			2.049854430	0.000282632	-0.000006703		
4P1/2			2.014216600	0.000530183	-0.000034546		
4P3/2			1.940257783	0.000207913	-0.000005145		
4D3/2			1.840315200	0.000645132	-0.000057189		
4D5/2			1.849643006	0.000213634	-0.000002858		
4F5/2			1.479860609	0.000630411	-0.000155462		
4F7/2			1.483388753	0.000019832	-0.000002487		
5S1/2			0.908156238	0.000046710	-0.000001396		
5P1/2			0.815770372	0.000069459	-0.000004808		
5P3/2			0.768202575	0.000027436	-0.000000785		
5D3/2			0.459244616	0.000028355	-0.000002693		
6S1/2			0.303549459	0.000004103	-0.000000126		
3D5/2 -- (6)	131.094067	-345.178136	3.947929514	0.005893686		-0.000000156	0.000000023
4S1/2			2.043963082	0.000337460	-0.000006725		
4P1/2			2.024463615	0.000232168	-0.000003218		
4P3/2			1.927373008	0.000415691	-0.000017281		
4D3/2			1.871644355	0.000174899	-0.000003032		
4D5/2			1.820710202	0.000594216	-0.000037388		
4F5/2			1.498978215	0.000130344	-0.000009822		
4F7/2			1.466664969	0.000393362	-0.000109263		
5S1/2			0.907195616	0.000054715	-0.000001399		
5P1/2			0.816876033	0.000031273	-0.000000562		
5P3/2			0.766637020	0.000053008	-0.000002403		
5D3/2			0.460495445	0.000007795	-0.000000155		
6S1/2			0.303465181	0.000004795	-0.000000126		
4S1/2 -- (2)	52.027154	-166.762761	1.621700125	0.000305488		-0.003608739	0.000082093
4P1/2			1.423494175	0.000158111	-0.000011454		
4P3/2			1.386258376	0.000182064	-0.000024635		
4D3/2			1.440419684	0.000137911	-0.000013281		
4D5/2			1.427146782	0.000120461	-0.000013977		
4F5/2			1.260762446	0.000076130	-0.000007898		
4F7/2			1.249884644	0.000065083	-0.000007860		
5S1/2			0.821701903	0.000036379	-0.000015571		
5P1/2			0.757010265	0.000024081	-0.000004796		
5P3/2			0.714323825	0.000022701	-0.000003352		
5D3/2			0.443915464	0.000003525	-0.000000388		
6S1/2			0.296207800	0.000003213	-0.000001410		
4P1/2 -- (2)	48.655246	-160.039997	1.589322952	0.000537275		-0.000250141	0.000008568

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
4P3/2			1.467380562	0.000077876	-0.000000299		
4D3/2			1.339386883	0.000306890	-0.000051749		
4D5/2			1.444941313	0.000074011	-0.000001942		
4F5/2			1.228677019	0.000120174	-0.000018884		
4F7/2			1.249948986	0.000043616	-0.000002111		
5S1/2			0.831511113	0.000045820	-0.000006663		
5P1/2			0.744177896	0.000037586	-0.000010384		
5P3/2			0.716244756	0.000013969	-0.000000878		
5D3/2			0.442164870	0.000006494	-0.000000939		
6S1/2			0.296951525	0.000003905	-0.000000588		
4P3/2 -- (4)	42.299973	-148.968560	1.456831536	0.000303033		-0.000022870	0.000001771
4D3/2			1.412195896	0.000091648	-0.000004341		
4D5/2			1.342215157	0.000191626	-0.000022490		
4F5/2			1.231721159	0.000057420	-0.000003826		
4F7/2			1.205856338	0.000082955	-0.000010919		
5S1/2			0.825302064	0.000059174	-0.000008496		
5P1/2			0.753661799	0.000015637	-0.000001289		
5P3/2			0.705880283	0.000028650	-0.000004742		
5D3/2			0.442657209	0.000002541	-0.000000172		
6S1/2			0.296437721	0.000004960	-0.000000732		
4D3/2 -- (4)	35.773135	-135.047378	1.379909587	0.000354616		-0.000000173	0.000000017
4D5/2			1.383189015	0.000067785	-0.000000002		
4F5/2			1.147240644	0.000173961	-0.000028373		
4F7/2			1.201431833	0.000036435	-0.000000493		
5S1/2			0.820587706	0.000021200	-0.000000662		
5P1/2			0.743107809	0.000040036	-0.000004062		
5P3/2			0.708182137	0.0000611605	-0.000000471		
5D3/2			0.438248703	0.000009785	-0.000000913		
6S1/2			0.296067973	0.000001792	-0.000000069		
4D5/2 -- (6)	34.382130	-132.313906	1.363011881	0.000303615		-0.000000036	0.000000005
4F5/2			1.199870221	0.000045366	-0.000001702		
4F7/2			1.148348460	0.000134710	-0.000019261		
5S1/2			0.818205115	0.000025521	-0.000000647		
5P1/2			0.747414320	0.000012743	-0.000000232		
5P3/2			0.704138926	0.000026296	-0.000001934		
5D3/2			0.441154558	0.000002625	-0.000000050		
6S1/2			0.295878288	0.000002103	-0.000000068		
4F5/2 -- (6)	20.160546	-97.712257	1.055073787	0.000183979		-0.000000000	0.000000000
4F7/2			1.064283343	0.000028131	-0.000000000		
5S1/2			0.767865763	0.000010934	-0.000000131		
5P1/2			0.699776547	0.0000612925	-0.000000115		
5P3/2			0.672059069	0.000006310	-0.000000017		
5D3/2			0.426392484	0.000004926	-0.000000021		
6S1/2			0.292056867	0.000000914	-0.000000000		
4F7/2 -- (1)	19.706661	-96.479798	0.000000000	0.000000000		-0.000000000	0.000000000
5S1/2			0.764819724	0.000014083	-0.000000139		
5P1/2			0.705553763	0.000008513	-0.000000015		
5P3/2			0.666346397	0.000011598	-0.000000052		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GADOLINIUM 4F7 5D1 Z=64 A=158 R=1.22595E-04 A.U.							
5D3/2			0.430136354	0.000002014	-0.000000000		
6S1/2			0.291806781	0.000001119	-0.000000000		
5S1/2 -- (2)	10.997525	-64.130576	0.674056640	0.000018080		-0.000616907	0.000014029
5P1/2			0.561816428	0.000016800	-0.000002150		
5P3/2			0.543788306	0.000013078	-0.000003175		
5D3/2			0.401898039	0.000005668	-0.000000769		
6S1/2			0.279704750	0.000001091	-0.000000480		
5P1/2 -- (2)	8.652346	-56.495363	0.600941677	0.000024644		-0.000035244	0.000001207
5P3/2			0.550449849	0.000003543	-0.000000015		
5D3/2			0.373616310	0.000013855	-0.000003210		
6S1/2			0.279221678	0.000002024	-0.000000296		
5P3/2 -- (4)	7.312611	-52.462943	0.543666347	0.000013402		-0.000003100	0.000000240
5D3/2			0.387307213	0.000003744	-0.000000346		
6S1/2			0.276895316	0.000002385	-0.000000348		
5D3/2 -- (1)	2.448301	-30.160233	0.000000000	0.000000000		-0.000000008	0.000000001
6S1/2			0.244016459	0.000000395	-0.000000003		
6S1/2 -- (2)	1.160358	-19.956506	0.222028334	0.000000544		-0.000054433	0.000001238
ETOT	-11265.26696	12285.10259	-27691.33420	4131.86432	11.601141356	-1.221189628	-1.311068901
TERBIUM 4F9 Z=65 A=158 R=1.22595E-04 A.U.							
1S1/2 -- (2)	2500.311345	-4746.567948	44.017631162	3.826227985		-0.599453654	0.014875814
2S1/2			13.466669834	0.194738235	-0.022727953		
2P1/2			16.146603459	0.404038741	-0.057928659		
2P3/2			14.546542744	0.196402332	-0.056795640		
3S1/2			5.541594809	0.040287853	-0.005028583		
3P1/2			6.015886231	0.077373492	-0.011081461		
3P3/2			5.585247353	0.039055438	-0.011640280		
3D3/2			5.632571708	0.001724229	-0.000215218		
3D5/2			5.501288827	0.000697421	-0.000223884		
4S1/2			2.468425279	0.009585469	-0.001212831		
4P1/2			2.497357537	0.017187307	-0.002461233		
4P3/2			2.336615761	0.008615016	-0.002583388		
4D3/2			2.152973086	0.000383850	-0.000048112		
4D5/2			2.107464404	0.000194239	-0.000049912		
4F5/2			1.512487394	0.000000478	-0.000000055		
4F7/2			1.486236192	0.000000178	-0.000000059		
5S1/2			0.972863308	0.001563630	-0.000198409		
5P1/2			0.869831451	0.002243775	-0.000321303		
5P3/2			0.805560697	0.001071845	-0.000321780		
6S1/2			0.296345869	0.000122479	-0.000015547		
2S1/2 -- (2)	567.625161	-1134.861424	9.948327587	0.068767031		-0.076373320	0.001812579
2P1/2			9.784546648	0.021070350	-0.000052927		
2P3/2			9.373612207	0.034104976	-0.000442239		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65 A=158 R=1.22595E-04 A.U.					
			4.674271599	0.007771349	-0.001902280		
			5.048697057	0.012555488	-0.001978687		
			4.809394917	0.010536335	-0.001349598		
			5.281842996	0.008488334	-0.001176403		
			5.184105219	0.003767009	-0.001162978		
			2.271276344	0.001834149	-0.000471442		
			2.287010644	0.002894555	-0.000469866		
			2.169940186	0.002362209	-0.000331939		
			2.086472953	0.001410828	-0.000205758		
			2.047746792	0.000651180	-0.000204438		
			1.511457231	0.000042930	-0.000005683		
			1.485287338	0.000015506	-0.000005476		
			0.940973405	0.000298624	-0.000077396		
			0.842470579	0.000379955	-0.000061971		
			0.784916268	0.000294406	-0.000041996		
			0.293850627	0.000023385	-0.000006067		
2P1/2 --	(2)	567.305352	-1134.035055	12.033488222	0.155927232	-0.005143005	0.000183984
				10.956812287	0.023265529	-0.000019221	
				4.930901310	0.005312127	-0.000389182	
				5.037314421	0.012028006	-0.001816879	
				4.991710503	0.005006683	-0.000138012	
				5.275539805	0.025480938	-0.006065863	
				5.327609660	0.000831864	-0.000184164	
				2.326107908	0.001244953	-0.000100937	
				2.289947947	0.002579354	-0.000425166	
				2.208367336	0.001098712	-0.000035462	
				2.086911604	0.004466489	-0.001092455	
				2.073466808	0.000169350	-0.000035275	
				1.511634785	0.000052000	-0.000010896	
				1.485778299	0.000002916	-0.000001099	
				0.949737721	0.000202411	-0.000016727	
				0.842968413	0.000334561	-0.000055951	
				0.789660504	0.000136534	-0.000004523	
				0.294535341	0.000015848	-0.000001313	
2P3/2 --	(4)	465.668300	-997.615009	10.647924793	0.084145945	-0.000451380	0.000036547
				4.865491098	0.006836055	-0.000461702	
				5.167315162	0.004230934	-0.000181186	
				4.822703486	0.009477076	-0.000854036	
				5.374872862	0.007537646	-0.000755753	
				5.182695389	0.012727280	-0.003613261	
				2.311057148	0.001547140	-0.000114148	
				2.312059189	0.000919008	-0.000045491	
				2.175019986	0.001998997	-0.000198598	
				2.103306322	0.001319393	-0.000133642	
				2.048738478	0.002171434	-0.000634248	
				1.511730250	0.000030583	-0.000003022	
				1.485318436	0.000026568	-0.000008534	
				0.947297652	0.000249877	-0.000018760	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65	A=158	R=1.22595E-04	A.U.		
3S1/2 -- (2)	174.447807	-413.940717				-0.016370532	0.000386045
3P1/2			0.845711425	0.000119498	-0.000006064		
3P3/2			0.785589598	0.000246724	-0.000324904		
6S1/2			0.294344361	0.000019548	-0.000001471		
3P1/2			3.754964003	0.004022721			
3P3/2			3.428798437	0.001445301	-0.000032267		
3D3/2			3.326702846	0.002182562	-0.000113394		
3D5/2			3.774001844	0.001329766	-0.000641377		
4S1/2			3.741798972	0.001788678	-0.000046748		
4P1/2			2.005574863	0.000603434	-0.000215833		
4P3/2			2.026796427	0.000726524	-0.000127959		
4D3/2			1.934330361	0.000672059	-0.000081076		
4D5/2			1.875582871	0.000318473	-0.000030493		
4F5/2			1.847457358	0.000321328	-0.000027672		
4F7/2			1.475012708	0.000170670	-0.000023790		
5S1/2			1.450832901	0.000075767	-0.000023009		
5P1/2			0.899999520	0.000097866	-0.000036164		
5P3/2			0.809415163	0.000099136	-0.000017969		
6S1/2			0.756394176	0.000086342	-0.000011095		
3P1/2 -- (2)	171.169494	-408.753781	0.290662026	0.000007658	-0.000002839		
3P3/2			3.936494646	0.007874115		-0.001219923	0.000043237
3D3/2			3.633085675	0.001160219	-0.000002732		
3D5/2			3.672467145	0.002894779	-0.000179957		
4S1/2			3.904288793	0.001338204	-0.000007371		
4P1/2			2.062095724	0.000538388	-0.000066460		
4P3/2			1.992760832	0.000819083	-0.000198661		
4D3/2			1.958835666	0.000320559	-0.000016207		
4D5/2			1.882447384	0.000769943	-0.000116159		
4F5/2			1.863154996	0.000211756	-0.000007466		
4F7/2			1.470354702	0.000289748	-0.000063368		
5S1/2			1.457810299	0.000030789	-0.000006640		
5P1/2			0.907937709	0.000084929	-0.000011153		
5P3/2			0.805933231	0.000104858	-0.000025403		
6S1/2			0.759210881	0.000040037	-0.000002253		
3P3/2 -- (4)	147.190260	-374.061463	0.291272853	0.000006624	-0.000000876		
3D3/2			3.593893788	0.004425779		-0.000110017	0.000008825
3D5/2			3.792888356	0.001010697	-0.000010619		
4S1/2			3.638326389	0.002470006	-0.000061845		
4P1/2			2.043233350	0.000724885	-0.000084191		
4P3/2			2.032460380	0.000318318	-0.000022071		
4D3/2			1.914384837	0.000647565	-0.000090162		
4D5/2			1.874333635	0.000258156	-0.000023264		
4F5/2			1.841461865	0.000607510	-0.000085176		
4F7/2			1.474798109	0.000149112	-0.000015056		
5S1/2			1.444145461	0.000140005	-0.000042141		
5P1/2			0.905022721	0.000111532	-0.000013576		
5P3/2			0.810023326	0.000041026	-0.000003147		
6S1/2			0.754262614	0.000078770	-0.000011632		
			0.291045887	0.000008675	-0.000001062		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM 4F9 Z=65 A=158 R=1.22595E-04 A.U.							
3D3/2 -- (4)	142.117459	-366.436391	4.091110555	0.007295101		-0.000000863	0.000000089
3D5/2			4.098806307	0.001369511	-0.000000027		
4S1/2			2.093751971	0.000300954	-0.000007167		
4P1/2			2.058763445	0.000565442	-0.000036968		
4P3/2			1.979319372	0.000220605	-0.000005465		
4D3/2			1.879023755	0.000685499	-0.000061092		
4D5/2			1.887035544	0.000226772	-0.000003048		
4F5/2			1.466714071	0.000642230	-0.000158365		
4F7/2			1.462897241	0.000020091	-0.000002513		
5S1/2			0.912681404	0.000047562	-0.000001424		
5P1/2			0.813531818	0.000069277	-0.0000034808		
5P3/2			0.761639887	0.000026946	-0.000000770		
6S1/2			0.291640575	0.000003711	-0.000000114		
3D5/2 -- (6)	136.552079	-357.849800	4.031400477	0.006267403		-0.000000179	0.000000027
4S1/2			2.087532078	0.000359072	-0.000007192		
4P1/2			2.069002885	0.000247374	-0.000003448		
4P3/2			1.966023078	0.000440647	-0.000018317		
4D3/2			1.910737707	0.000185793	-0.000003242		
4D5/2			1.857440750	0.000629817	-0.000039852		
4F5/2			1.485310828	0.000132852	-0.000010002		
4F7/2			1.446664136	0.000397623	-0.0000110423		
5S1/2			0.911711296	0.000055679	-0.000001427		
5P1/2			0.814562257	0.000031149	-0.000000561		
5P3/2			0.760140817	0.000052040	-0.000002358		
6S1/2			0.291564966	0.000004335	-0.000000114		
4S1/2 -- (2)	54.427298	-173.240654	1.655986119	0.000325856		-0.003926353	0.000092456
4P1/2			1.454235533	0.000167429	-0.000011975		
4P3/2			1.414572824	0.000193795	-0.000026501		
4D3/2			1.470439428	0.000146408	-0.000014057		
4D5/2			1.456199118	0.000128000	-0.000014821		
4F5/2			1.253004065	0.000077243	-0.000007983		
4F7/2			1.236937100	0.000065538	-0.000007894		
5S1/2			0.827990409	0.000037032	-0.000015775		
5P1/2			0.757217168	0.000024033	-0.000004762		
5P3/2			0.710682680	0.000022063	-0.000003257		
6S1/2			0.285238328	0.000002905	-0.000001267		
4P1/2 -- (2)	50.939874	-166.341061	1.624142143	0.000574002		-0.000283120	0.000010014
4P3/2			1.497849907	0.000082117	-0.000000341		
4D3/2			1.367816636	0.000326778	-0.000055090		
4D5/2			1.474819531	0.000078597	-0.000002070		
4F5/2			1.222065804	0.000122203	-0.000019163		
4F7/2			1.237320753	0.000043911	-0.000002124		
5S1/2			0.837739543	0.000046436	-0.000006725		
5P1/2			0.744881985	0.000037521	-0.000010286		
5P3/2			0.712595873	0.000013603	-0.000000849		
6S1/2			0.285902535	0.000003525	-0.000000527		
4P3/2 -- (4)	44.018099	-154.342700	1.485469489	0.000321366		-0.000025309	0.000002026
4D3/2			1.440601219	0.000096791	-0.000004538		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TERBIUM	4F9	Z=65 A=158 R=1.22595E-04 A.U.					
4D5/2			1.368647740	0.000202921	-0.000023623		
4F5/2			1.224016228	0.000058181	-0.000003861		
4F7/2			1.193657385	0.000083463	-0.000010966		
5S1/2			0.831379964	0.000060388	-0.000008660		
5P1/2			0.753876369	0.000015589	-0.000001281		
5P3/2			0.702572984	0.000028114	-0.000004610		
6S1/2			0.285433766	0.000004509	-0.000000664		
4D3/2 -- (4)	37.269623	-140.014854	1.408191678	0.000376840		-0.000000200	0.000000021
4D5/2			1.410928823	0.000071827	-0.000000003		
4F5/2			1.141804080	0.000177380	-0.000028973		
4F7/2			1.189766331	0.000036615	-0.000000497		
5S1/2			0.826817934	0.000021553	-0.000000663		
5P1/2			0.743692613	0.000039906	-0.000004021		
5P3/2			0.704854345	0.000011369	-0.000000455		
6S1/2			0.285116147	0.000001623	-0.000000061		
4D5/2 -- (6)	35.751834	-137.044375	1.389766595	0.000321823		-0.000000041	0.000000006
4F5/2			1.192932250	0.000046083	-0.000001732		
4F7/2			1.137763714	0.000136133	-0.000019538		
5S1/2			0.824351397	0.000025988	-0.000000646		
5P1/2			0.747828696	0.000012714	-0.000000228		
5P3/2			0.700914702	0.000025793	-0.000001874		
6S1/2			0.284941208	0.000001909	-0.000000060		
4F5/2 -- (6)	20.132731	-98.311765	1.027389744	0.000179357		-0.000000000	0.000000000
4F7/2			1.032297517	0.000027074	-0.000000000		
5S1/2			0.762137739	0.000010873	-0.000000160		
5P1/2			0.690876790	0.000012636	-0.000000165		
5P3/2			0.661245150	0.000006062	-0.000000025		
6S1/2			0.280527870	0.000000805	-0.000000000		
4F7/2 -- (3)	19.541597	-96.605428	1.010232430	0.000162707		-0.000000000	0.000000000
5S1/2			0.756992161	0.000013838	-0.000000171		
5P1/2			0.695292775	0.000008220	-0.000000021		
5P3/2			0.653818418	0.000011097	-0.000000081		
6S1/2			0.280072291	0.000000989	-0.000000000		
5S1/2 -- (2)	10.994585	-65.323281	0.677361917	0.000018185		-0.000641592	0.000015103
5P1/2			0.562225944	0.000016894	-0.0000002174		
5P3/2			0.542408886	0.000013003	-0.0000003194		
6S1/2			0.270230644	0.000000959	-0.0000000412		
5P1/2 -- (2)	8.483959	-57.064861	0.599031836	0.000024206		-0.000037273	0.000001318
5P3/2			0.547123992	0.000003418	-0.000000015		
6S1/2			0.269596384	0.000001774	-0.0000000256		
5P3/2 -- (4)	7.062431	-52.668588	0.538886836	0.000012927		-0.0000003174	0.000000254
6S1/2			0.267238145	0.000002095	-0.0000000300		
6S1/2 -- (2)	1.031432	-19.425973	0.213366566	0.000000477		-0.000050267	0.000001183
ETOT	-11702.99532	12800.02195	-28828.71745	4316.12895	12.234904553	-1.289346925	-1.409363175
						0.035034712	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
1S1/2 -- (2)	2595.312985	-4916.085744	44.843949498	4.017146679		-0.642860597	0.016515573
2S1/2			13.736394475	0.205186960	-0.023991813		
2P1/2			16.487915528	0.425774962	-0.060818311		
2P3/2			14.799761881	0.206147801	-0.059613547		
3S1/2			5.661148279	0.042633563	-0.005331652		
3P1/2			6.152896993	0.081890963	-0.011679996		
3P3/2			5.697821002	0.041266739	-0.012300066		
3D3/2			5.750727814	0.001830118	-0.000227760		
3D5/2			5.612328968	0.000739479	-0.000237384		
4S1/2			2.524264886	0.010175618	-0.001290087		
4P1/2			2.557368628	0.018259889	-0.002603789		
4P3/2			2.386781630	0.009131859	-0.002738663		
4D3/2			2.203910747	0.000410229	-0.000051268		
4D5/2			2.155603440	0.000164604	-0.000053271		
4F5/2			1.561229365	0.000000535	-0.000000061		
4F7/2			1.533024629	0.000000199	-0.000000066		
5S1/2			0.991983087	0.001648917	-0.000209655		
5P1/2			0.886957118	0.002361661	-0.000336750		
5P3/2			0.818687911	0.001122093	-0.000336903		
6S1/2			0.300104991	0.000126763	-0.000016124		
2S1/2 -- (2)	591.283205	-1177.727649	10.143003448	0.072755955		-0.082505810	0.002025487
2P1/2			9.981500979	0.022285331	-0.000054284		
2P3/2			9.547361259	0.035889514	-0.000482862		
3S1/2			4.770783316	0.008258169	-0.002021312		
3P1/2			5.157314713	0.013387702	-0.002108777		
3P3/2			4.905036864	0.011119236	-0.001420306		
3D3/2			5.391522866	0.009004082	-0.001247442		
3D5/2			5.288546598	0.003991899	-0.001233075		
4S1/2			2.321223976	0.001955111	-0.000502569		
4P1/2			2.339966717	0.003097860	-0.000502613		
4P3/2			2.215942326	0.002502020	-0.000350937		
4D3/2			2.135391910	0.001503442	-0.000219284		
4D5/2			2.094306782	0.000693396	-0.000217849		
4F5/2			1.560125978	0.000047646	-0.000006307		
4F7/2			1.532011454	0.000017179	-0.000006069		
5S1/2			0.959356573	0.000316209	-0.000081961		
5P1/2			0.858939652	0.000402856	-0.000065672		
5P3/2			0.797789665	0.000307993	-0.000043858		
6S1/2			0.297599443	0.000024303	-0.000006306		
2P1/2 -- (2)	590.906727	-1176.849281	12.280359982	0.165026906		-0.005768211	0.000213006
2P3/2			11.162874327	0.024432634	-0.000021638		
3S1/2			5.034735804	0.005642364	-0.000412816		
3P1/2			5.146202049	0.012796243	-0.001933350		
3P3/2			5.092312048	0.005295208	-0.000145842		
3D3/2			5.385777537	0.027023551	-0.006433434		
3D5/2			5.435456238	0.000879635	-0.000195137		
4S1/2			2.377795653	0.001326631	-0.000107472		
4P1/2			2.343148244	0.002754458	-0.000454279		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10	Z=66 A=164 R=1.24127E-04 A.U.						
4P3/2			2.255532372	0.001165908	-0.000037627		
4D3/2			2.135978947	0.004762211	-0.001165098		
4D5/2			2.120777707	0.000180145	-0.000037590		
4F5/2			1.560318917	0.000057622	-0.000012077		
4F7/2			1.532537059	0.000003225	-0.000001216		
5S1/2			0.968339275	0.000214266	-0.000017694		
5P1/2			0.859468417	0.000353955	-0.000059230		
5P3/2			0.802616919	0.000143095	-0.000004740		
6S1/2			0.298288217	0.000016465	-0.000001363		
2P3/2 -- (4)	481.731556	-1030.512445	10.832018182	0.088427004		-0.000495095	0.000041438
3S1/2			4.965223655	0.007247507	-0.000492712		
3P1/2			5.276773029	0.004486505	-0.000193046		
3P3/2			4.916752741	0.010015190	-0.000904453		
3D3/2			5.485514757	0.007995811	-0.000800664		
3D5/2			5.285019513	0.013488106	-0.003829565		
4S1/2			2.361749801	0.001644360	-0.000122052		
4P1/2			2.365278676	0.000978050	-0.000048651		
4P3/2			2.220760817	0.002118250	-0.000210968		
4D3/2			2.152497597	0.001405553	-0.000142189		
4D5/2			2.095086153	0.002310313	-0.000675056		
4F5/2			1.560412077	0.000034096	-0.000003368		
4F7/2			1.532037351	0.000029563	-0.000009500		
5S1/2			0.955755040	0.000263791	-0.000019923		
5P1/2			0.862183938	0.000125991	-0.000006425		
5P3/2			0.798424042	0.000258189	-0.000026127		
6S1/2			0.298089705	0.000020253	-0.000001533		
3S1/2 -- (2)	182.348712	-430.052679	3.832797019	0.004284171		-0.017774716	0.000433523
3P1/2			3.501756869	0.001534088	-0.000033293		
3P3/2			3.394052190	0.002314539	-0.000122578		
3D3/2			3.853006477	0.001412065	-0.000043612		
3D5/2			3.819064129	0.001899746	-0.000049502		
4S1/2			2.049108749	0.000644963	-0.000230688		
4P1/2			2.072833013	0.000782925	-0.000137834		
4P3/2			1.974979389	0.000712463	-0.000086013		
4D3/2			1.919031371	0.000342132	-0.000032844		
4D5/2			1.889227309	0.000343405	-0.000029712		
4F5/2			1.521576297	0.000187201	-0.000026100		
4F7/2			1.495645324	0.000083161	-0.000025214		
5S1/2			0.917666857	0.000103909	-0.000038393		
5P1/2			0.825317217	0.000105794	-0.000019165		
5P3/2			0.768978282	0.000090423	-0.000011625		
6S1/2			0.294415062	0.000007980	-0.000002958		
3P1/2 -- (2)	179.009240	-424.805134	4.021646235	0.008395068		-0.001376674	0.000050351
3P3/2			3.708109249	0.001224639	-0.000003110		
3D3/2			3.751115623	0.003078327	-0.000191260		
3D5/2			3.986582792	0.001422126	-0.000007876		
4S1/2			2.107323694	0.000573698	-0.000070787		
4P1/2			2.038175834	0.000877363	-0.000202270		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10	Z=66 A=164 R=1.24127E-04 A.U.						
4P3/2			2.000335937	0.000339977	-0.000017253		
4D3/2			1.926352836	0.000826002	-0.000124859		
4D5/2			1.905561577	0.000226256	-0.000008000		
4F5/2			1.516787380	0.000317854	-0.000069535		
4F7/2			1.503077997	0.000033858	-0.000007280		
5S1/2			0.925794536	0.000089937	-0.000011807		
5P1/2			0.821811031	0.000111283	-0.000026981		
5P3/2			0.771858394	0.000041951	-0.000002369		
6S1/2			0.295029040	0.000006885	-0.000000910		
3P3/2 -- (4)	153.148634	-387.505410	3.664723000	0.004692671	-0.000121558	0.000010076	
3D3/2			3.870033209	0.001070198	-0.000010901		
3D5/2			3.711622646	0.002618046	-0.000064183		
4S1/2			2.087351187	0.000774844	-0.000090374		
4P1/2			2.078238241	0.000340623	-0.000023732		
4P3/2			1.954291149	0.000689175	-0.000096167		
4D3/2			1.917435746	0.000278213	-0.000025162		
4D5/2			1.882769109	0.000651673	-0.000091997		
4F5/2			1.521238824	0.000163538	-0.000016509		
4F7/2			1.488493646	0.000153509	-0.000046153		
5S1/2			0.922728132	0.000118378	-0.000014466		
5P1/2			0.825885905	0.000043482	-0.000003350		
5P3/2			0.766789680	0.000082796	-0.000012251		
6S1/2			0.294794698	0.000009037	-0.000001110		
3D3/2 -- (4)	148.054152	-379.882493	4.177740678	0.007754909	-0.000000995	0.000000106	
3D5/2			4.184327400	0.001454487	-0.000000031		
4S1/2			2.139552705	0.000320809	-0.000007674		
4P1/2			2.105735936	0.000604123	-0.000039650		
4P3/2			2.021116737	0.000234643	-0.000005822		
4D3/2			1.922775100	0.000732324	-0.000065624		
4D5/2			1.929940643	0.000242146	-0.000003272		
4F5/2			1.512982369	0.000705278	-0.000173937		
4F7/2			1.508442581	0.000022128	-0.000002758		
5S1/2			0.930590074	0.000050368	-0.000001514		
5P1/2			0.829514547	0.000073325	-0.000005109		
5P3/2			0.774291402	0.000028312	-0.000000811		
6S1/2			0.295393908	0.000003857	-0.000000119		
3D5/2 -- (6)	142.079126	-370.690754	4.114227154	0.006653295	-0.000000205	0.000000032	
4S1/2			2.132975760	0.000382460	-0.000007701		
4P1/2			2.115983731	0.000264001	-0.000003701		
4P3/2			2.007350074	0.000468207	-0.000019474		
4D3/2			1.955069513	0.000198434	-0.000003486		
4D5/2			1.899464832	0.000671456	-0.000042736		
4F5/2			1.532496768	0.000145998	-0.000010982		
4F7/2			1.491329687	0.000436142	-0.000121117		
5S1/2			0.929570798	0.000058913	-0.000001517		
5P1/2			0.830530193	0.000032933	-0.000000597		
5P3/2			0.772756372	0.000054623	-0.000002477		
6S1/2			0.295315934	0.000004502	-0.000000119		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10	Z=66 A=164 R=1.24127E-04 A.U.						
4S1/2 -- (2)	57.034708	-180.076897	1.692119262	0.000348455		-0.004277486	0.000104173
4P1/2			1.486850467	0.000177620	-0.000012518		
4P3/2			1.444860677	0.000206925	-0.000028562		
4D3/2			1.503874098	0.000156050	-0.000014915		
4D5/2			1.488796130	0.000136828	-0.000015762		
4F5/2			1.289505904	0.000083371	-0.000008546		
4F7/2			1.272366353	0.000071225	-0.000008452		
5S1/2			0.844554783	0.000039336	-0.000016734		
5P1/2			0.772368863	0.000025696	-0.000005081		
5P3/2			0.722895888	0.000023092	-0.000003423		
6S1/2			0.289008144	0.000003029	-0.000001319		
4P1/2 -- (2)	53.451076	-173.042582	1.661344476	0.000615268		-0.000320911	0.000011712
4P3/2			1.530658916	0.000086918	-0.000000391		
4D3/2			1.399600415	0.000349276	-0.000058774		
4D5/2			1.508524067	0.000084076	-0.000002215		
4F5/2			1.257989073	0.000132031	-0.000020540		
4F7/2			1.273185206	0.000047880	-0.000002278		
5S1/2			0.854591480	0.000049064	-0.000007097		
5P1/2			0.759914302	0.000039873	-0.000010916		
5P3/2			0.724915866	0.000014227	-0.000000891		
6S1/2			0.289681178	0.000003658	-0.000000547		
4P3/2 -- (4)	45.938625	-160.094777	1.516579906	0.000342273		-0.000028065	0.000002321
4D3/2			1.472666468	0.000102683	-0.000004746		
4D5/2			1.398696123	0.000216072	-0.000024840		
4F5/2			1.258872704	0.000062593	-0.000004105		
4F7/2			1.227063914	0.000090279	-0.000011658		
5S1/2			0.847896742	0.000064242	-0.000009223		
5P1/2			0.768878285	0.000016567	-0.000001365		
5P3/2			0.714656452	0.000029588	-0.000004845		
6S1/2			0.289196590	0.000004710	-0.000000694		
4D3/2 -- (4)	39.038471	-145.533668	1.441234095	0.000403887		-0.000000232	0.000000025
4D5/2			1.443564769	0.000076822	-0.000000003		
4F5/2			1.175204541	0.000190964	-0.000030869		
4F7/2			1.224089119	0.000039913	-0.000000530		
5S1/2			0.843594587	0.000022876	-0.000000705		
5P1/2			0.758776323	0.000042338	-0.000004266		
5P3/2			0.717173550	0.000011952	-0.000000476		
6S1/2			0.288903157	0.000001691	-0.000000063		
4D5/2 -- (6)	37.392334	-142.331876	1.421469280	0.000344267		-0.000000048	0.000000008
4F5/2			1.227497495	0.000049683	-0.000001840		
4F7/2			1.170172810	0.000146794	-0.000020766		
5S1/2			0.841001409	0.000027573	-0.000000686		
5P1/2			0.762903481	0.000013489	-0.000000241		
5P3/2			0.713153614	0.000027110	-0.000001962		
6S1/2			0.288722440	0.000001989	-0.000000062		
4F5/2 -- (6)	21.417088	-103.041231	1.061856591	0.000197381		-0.000000000	0.000000000
4F7/2			1.066474210	0.000029794	-0.000000000		
5S1/2			0.780008652	0.000011629	-0.000000162		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
DYSPROSIUM 4F10 Z=66 A=164 R=1.24127E-04 A.U.							
5P1/2			0.706888737	0.000013502	-0.000000165		
5P3/2			0.674625489	0.000006438	-0.000000025		
6S1/2			0.284486212	0.000000847	-0.000000000		
4F7/2 -- (4)	20.763217	-101.179709	1.043201648	0.000178708		-0.000000000	0.000000000
5S1/2			0.774588694	0.000014804	-0.000000174		
5P1/2			0.711112991	0.000008789	-0.000000021		
5P3/2			0.667045540	0.000011770	-0.000000080		
6S1/2			0.284017931	0.000001040	-0.000000000		
5S1/2 -- (2)	11.440028	-67.654909	0.690659420	0.000019269		-0.0000694376	0.000016905
5P1/2			0.573260811	0.000017797	-0.000002284		
5P3/2			0.552163611	0.000013766	-0.000003395		
6S1/2			0.273947817	0.000000995	-0.000000425		
5P1/2 -- (2)	8.819813	-59.091769	0.610787010	0.000025643		-0.000041861	0.000001527
5P3/2			0.556981415	0.000003569	-0.000000017		
6S1/2			0.273317727	0.000001834	-0.000000264		
5P3/2 -- (4)	7.282853	-54.349629	0.547809685	0.000013562		-0.000003476	0.000000287
6S1/2			0.270838751	0.000002176	-0.000000310		
6S1/2 -- (2)	1.053176	-19.974834	0.216176032	0.000000495		-0.000053394	0.000001300
ETOT	-12151.46190	13330.48067	-29983.33865	4491.33295	12.898832605	-1.360713725	-1.513947273
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
1S1/2 -- (2)	2693.115577	-5089.892791	45.678673875	4.214932006		-0.689022466	0.018308098
2S1/2			14.009150123	0.216055926	-0.025309550		
2P1/2			16.833881393	0.448370365	-0.063801816		
2P3/2			15.053776259	0.216207256	-0.062522118		
3S1/2			5.781774762	0.045077969	-0.005648217		
3P1/2			6.291317875	0.086591930	-0.012297970		
3P3/2			5.810699312	0.043560894	-0.012984445		
3D3/2			5.869132509	0.001939832	-0.000240684		
3D5/2			5.723349460	0.000782985	-0.000251350		
4S1/2			2.580385122	0.010790379	-0.001370761		
4P1/2			2.617720487	0.019375799	-0.002750912		
4P3/2			2.436834849	0.009667300	-0.002899507		
4D3/2			2.254664406	0.000437574	-0.000054520		
4D5/2			2.203447334	0.000175324	-0.000056744		
4F5/2			1.608886794	0.000000595	-0.000000068		
4F7/2			1.578561435	0.000000221	-0.000000073		
5S1/2			1.011124528	0.001737191	-0.000221323		
5P1/2			0.904096309	0.002483253	-0.000352544		
5P3/2			0.831663477	0.001173363	-0.000352331		
6S1/2			0.303864770	0.000131162	-0.000016717		
2S1/2 -- (2)	615.725788	-1221.783040	10.339597275	0.076928972		-0.089084836	0.002260034
2P1/2			10.180614397	0.023556269	-0.000055663		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
2P3/2			9.722196153	0.037740098	-0.000527160		
3S1/2			4.868027013	0.008768326	-0.002145932		
3P1/2			5.266823464	0.014261621	-0.002245212		
3P3/2			5.000996213	0.011721194	-0.001492771		
3D3/2			5.501511676	0.009540671	-0.001321294		
3D5/2			5.393091518	0.004225344	-0.001305931		
4S1/2			2.371386174	0.002081845	-0.000535155		
4P1/2			2.393157716	0.003311358	-0.000536951		
4P3/2			2.261863963	0.002646353	-0.000370429		
4D3/2			2.184149303	0.001599749	-0.000233339		
4D5/2			2.140609604	0.000737177	-0.000231780		
4F5/2			1.6077710931	0.000052593	-0.000006961		
4F7/2			1.577485197	0.000018925	-0.000006689		
5S1/2			0.977757573	0.000334519	-0.000086709		
5P1/2			0.875416904	0.000426702	-0.000069521		
5P3/2			0.810521605	0.000321800	-0.000045736		
6S1/2			0.301348124	0.00025251	-0.000006552		
2P1/2 -- (2)	615.282450	-1220.841984	12.530097041	0.174549335		-0.006462857	0.000246144
2P3/2			11.370276718	0.025637421	-0.000024319		
3S1/2			5.139434952	0.005988396	-0.000437504		
3P1/2			5.255990589	0.013602250	-0.002055372		
3P3/2			5.193282598	0.005594717	-0.000153947		
3D3/2			5.496352602	0.028626533	-0.006815379		
3D5/2			5.543370961	0.000928940	-0.000206516		
4S1/2			2.429724318	0.001412211	-0.000114297		
4P1/2			2.396588741	0.002938198	-0.000484794		
4P3/2			2.302622056	0.001235592	-0.000039866		
4D3/2			2.184890565	0.005069506	-0.001240580		
4D5/2			2.167820198	0.000191277	-0.000039989		
4F5/2			1.607919443	0.000063504	-0.000013313		
4F7/2			1.578044964	0.000003547	-0.000001338		
5S1/2			0.986960795	0.000226612	-0.000018698		
5P1/2			0.875976811	0.000374141	-0.000062638		
5P3/2			0.815430449	0.000149797	-0.000004961		
6S1/2			0.302041214	0.000017103	-0.000001415		
2P3/2 -- (4)	498.099591	-1063.987867	11.016509483	0.092853554		-0.000542286	0.000046889
3S1/2			5.065612194	0.007677591	-0.000525429		
3P1/2			5.386958584	0.004753297	-0.000205488		
3P3/2			5.010973147	0.010573444	-0.000956846		
3D3/2			5.596343743	0.008472111	-0.000847255		
3D5/2			5.387928627	0.014277943	-0.004054133		
4S1/2			2.412632902	0.001745849	-0.000130371		
4P1/2			2.418692192	0.001039657	-0.000051964		
4P3/2			2.266386720	0.002241722	-0.000223801		
4D3/2			2.201500360	0.001494925	-0.000151034		
4D5/2			2.141153798	0.002454112	-0.000717320		
4F5/2			1.608000804	0.000037811	-0.000003733		
4F7/2			1.577504590	0.000032715	-0.000010517		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
5S1/2			0.984225971	0.000278221	-0.000021138		
5P1/2			0.878659786	0.000132709	-0.000006800		
5P3/2			0.811113810	0.000269880	-0.000027376		
6S1/2			0.301834886	0.000020979	-0.000001597		
3S1/2 -- (2)	190.505164	-446.583966	3.911167585	0.004558523		-0.019285979	0.000486027
3P1/2			3.575246647	0.001627110	-0.000034339		
3P3/2			3.461688465	0.002452089	-0.000132514		
3D3/2			3.932354058	0.001498106	-0.000045978		
3D5/2			3.896598924	0.002015545	-0.000052431		
4S1/2			2.092822551	0.000688529	-0.000246252		
4P1/2			2.119059629	0.000842412	-0.000148238		
4P3/2			2.015576219	0.000753953	-0.000091077		
4D3/2			1.962369590	0.000366753	-0.000035288		
4D5/2			1.930817753	0.000366357	-0.000031821		
4F5/2			1.567104437	0.000204421	-0.000028506		
4F7/2			1.539266632	0.000090845	-0.000027504		
5S1/2			0.935352114	0.000110209	-0.000040714		
5P1/2			0.841227504	0.000112752	-0.000020412		
5P3/2			0.781431326	0.000094544	-0.000012160		
6S1/2			0.298166712	0.000008313	-0.000003081		
3P1/2 -- (2)	187.101782	-441.272676	4.107419690	0.008942073		-0.001551633	0.000058512
3P3/2			3.783459034	0.001291107	-0.000003533		
3D3/2			3.830088858	0.003270675	-0.000203331		
3D5/2			4.069171839	0.001509567	-0.000008419		
4S1/2			2.152747323	0.000610653	-0.000075308		
4P1/2			2.083778482	0.000938608	-0.000216554		
4P3/2			2.041789116	0.000360014	-0.000018339		
4D3/2			1.970150802	0.000884095	-0.000133851		
4D5/2			1.947787607	0.000241370	-0.000008553		
4F5/2			1.562198273	0.000347137	-0.000075961		
4F7/2			1.547147789	0.000037047	-0.000007943		
5S1/2			0.943669986	0.000095147	-0.000012486		
5P1/2			0.837696731	0.000117979	-0.000028622		
5P3/2			0.784373879	0.000043896	-0.000002487		
6S1/2			0.298783986	0.000007155	-0.000000946		
3P3/2 -- (4)	159.236463	-401.202230	3.735660065	0.004970304		-0.000134093	0.000011479
3D3/2			3.947283821	0.001132064	-0.000011186		
3D5/2			3.784959237	0.002771905	-0.000066602		
4S1/2			2.131613447	0.000827372	-0.000096914		
4P1/2			2.124160246	0.000364037	-0.000025483		
4P3/2			1.994114668	0.000732419	-0.000102413		
4D3/2			1.960389487	0.000299215	-0.000027151		
4D5/2			1.923862121	0.000697639	-0.000099118		
4F5/2			1.566623360	0.000178562	-0.000018020		
4F7/2			1.531640308	0.000167539	-0.000050316		
5S1/2			0.940446090	0.000125525	-0.000015399		
5P1/2			0.841751899	0.000046038	-0.000003561		
5P3/2			0.779183302	0.000086918	-0.000012885		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
3D3/2 -- 6S1/2	154.121526	-393.581909	0.298541998	0.000009412	-0.000001161	-0.000001144	0.000000126
(4)			4.264483991	0.008233852			
3D5/2			4.269881587	0.001542817	-0.000000035		
4S1/2			2.185505635	0.000341562	-0.000008205		
4P1/2			2.152860280	0.000644677	-0.000042478		
4P3/2			2.062824979	0.000249225	-0.000006193		
4D3/2			1.966379777	0.000781062	-0.000070353		
4D5/2			1.972622668	0.000258113	-0.000003504		
4F5/2			1.558217132	0.000771061	-0.000190186		
4F7/2			1.552770633	0.000024251	-0.000003013		
5S1/2			0.948510465	0.000053281	-0.000001608		
5P1/2			0.845499976	0.000077532	-0.000005424		
5P3/2			0.786805864	0.000029709	-0.000000852		
6S1/2			0.299145714	0.000004008	-0.000000124		
3D5/2 -- (6)	147.714011	-383.752580	4.197010081	0.007054330		-0.000000235	0.000000038
4S1/2			2.178556362	0.000406879	-0.000008235		
4P1/2			2.163102290	0.000281374	-0.000003967		
4P3/2			2.048577221	0.000496806	-0.000020676		
4D3/2			1.999237036	0.000211577	-0.000003741		
4D5/2			1.941260446	0.000714649	-0.000045738		
4F5/2			1.578621474	0.000159723	-0.000012004		
4F7/2			1.534794650	0.000476199	-0.000132237		
5S1/2			0.947440219	0.000062266	-0.000001611		
5P1/2			0.846499403	0.000034781	-0.000000633		
5P3/2			0.785234457	0.000057263	-0.000002600		
6S1/2			0.299065299	0.000004674	-0.000000124		
4S1/2 -- (2)	59.719417	-187.070537	1.728381723	0.000372159		-0.0004655661	0.000117150
4P1/2			1.519583191	0.000188259	-0.000013076		
4P3/2			1.475163527	0.000220688	-0.000030774		
4D3/2			1.537281652	0.000166143	-0.000015816		
4D5/2			1.521330108	0.000146016	-0.000016753		
4F5/2			1.325270113	0.000089725	-0.000009128		
4F7/2			1.306945574	0.000077116	-0.000009027		
5S1/2			0.861135009	0.000041734	-0.000017730		
5P1/2			0.787527358	0.000027434	-0.000005413		
5P3/2			0.734990155	0.000024125	-0.000003592		
6S1/2			0.292773962	0.000003156	-0.000001373		
4P1/2 -- (2)	56.037532	-179.898633	1.698677777	0.000658611		-0.000363186	0.000013666
4P3/2			1.563478771	0.000091850	-0.000000446		
4D3/2			1.431366373	0.000372933	-0.000062675		
4D5/2			1.542167061	0.000089759	-0.000002369		
4F5/2			1.293225346	0.000142244	-0.000021966		
4F7/2			1.308215359	0.000051998	-0.000002438		
5S1/2			0.871458186	0.000051790	-0.000007482		
5P1/2			0.774952454	0.000042321	-0.000011570		
5P3/2			0.737116068	0.000014856	-0.000000933		
6S1/2			0.293455658	0.000003795	-0.000000566		
4P3/2 -- (4)			1.547605253	0.000363987		-0.000031060	0.000002653

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HOLMIUM 4F11 Z=67 A=165 R=1.24379E-04 A.U.							
4D3/2			1.504615011	0.0C0108791	-0.000004960		
4D5/2			1.428604892	0.000229727	-0.000026100		
4F5/2			1.292947805	0.000067141	-0.000004353		
4F7/2			1.259604436	0.000097308	-0.000012364		
5S1/2			0.864413622	0.000068277	-0.000009814		
5P1/2			0.783876125	0.000017586	-0.000001453		
5P3/2			0.726616998	0.000031096	-0.000005086		
6S1/2			0.292954622	0.000004917	-0.000000725		
4D3/2 -- (4)	40.841174	-151.142118	1.474141852	0.000432060		-0.000000269	0.000000030
4D5/2			1.476033998	0.000082005	-0.000000004		
4F5/2			1.207925417	0.000205020	-0.000032819		
4F7/2			1.257567707	0.0C0043331	-0.000000565		
5S1/2			0.860360755	0.0C0024250	-0.000000748		
5P1/2			0.773645268	0.000044869	-0.000004520		
5P3/2			0.729360528	0.000012549	-0.000000498		
6S1/2			0.292683739	0.000001762	-0.000000065		
4D5/2 -- (6)	39.058956	-147.695904	1.452978063	0.0C0367568		-0.000000055	0.000000009
4F5/2			1.261304410	0.000053402	-0.000001950		
4F7/2			1.201767915	0.000157790	-0.000022022		
5S1/2			0.857635441	0.000029219	-0.000000728		
5P1/2			0.777962817	0.000014292	-0.000000256		
5P3/2			0.725258199	0.0C0028455	-0.000002051		
6S1/2			0.292496985	0.000002072	-0.000000064		
4F5/2 -- (6)	22.715203	-107.795518	1.095371386	0.000216134		-0.000000000	0.000000000
4F7/2			1.099596296	0.000032615	-0.000000000		
5S1/2			0.797598650	0.000012410	-0.000000166		
5P1/2			0.722658925	0.000014397	-0.000000167		
5P3/2			0.687678425	0.000006821	-0.000000025		
6S1/2			0.288408099	0.000000889	-0.000000000		
4F7/2 -- (5)	21.992840	-105.763707	1.075050867	0.000195263		-0.000000000	0.000000000
5S1/2			0.791861201	0.000015798	-0.000000178		
5P1/2			0.726666533	0.000009373	-0.000000022		
5P3/2			0.679910349	0.0C0012454	-0.000000080		
6S1/2			0.287922240	0.0C0001090	-0.000000000		
5S1/2 -- (2)	11.895400	-70.029490	0.703964162	0.000020395		-0.000750896	0.000018889
5P1/2			0.584298947	0.000018732	-0.000002398		
5P3/2			0.561864920	0.000014561	-0.000003606		
6S1/2			0.277657246	0.000001032	-0.000000439		
5P1/2 -- (2)	9.162758	-61.154927	0.622541643	0.000027135		-0.000046952	0.000001766
5P3/2			0.566780757	0.000003721	-0.000000019		
6S1/2			0.277030724	0.000001895	-0.000000272		
5P3/2 -- (4)	7.503530	-56.046722	0.556631192	0.0C0014210		-0.000003800	0.000000324
6S1/2			0.274425897	0.000002259	-0.000000321		
6S1/2 -- (2)	1.075354	-20.531403	0.218974319	0.000000514		-0.000056708	0.000001426
ETOT	-12610.78705	13876.92213	-31170.00933	4671.72837	13.588751090	-1.434825439	-1.625414691
							0.043269712

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM 4F12 Z=68 A=166 R=1.24630E-04 A.U.							
1S1/2 -- (2)	2793.770559	-5268.053554	46.521909876	4.419712746		-0.738042759	0.020265264
2S1/2			14.284996921	0.227356013	-0.026682888		
2P1/2			17.184653555	0.471850288	-0.066880428		
2P3/2			15.308594484	0.226585131	-0.065522541		
3S1/2			5.903500431	0.047623652	-0.005978677		
3P1/2			6.431199534	0.091481217	-0.012935672		
3P3/2			5.923892278	0.045939553	-0.013694052		
3D3/2			5.987797461	0.002053402	-0.000253984		
3D5/2			5.834355783	0.000827946	-0.000265778		
4S1/2			2.636820546	0.011430563	-0.001454978		
4P1/2			2.678461126	0.020536515	-0.002902698		
4P3/2			2.486808851	0.010221847	-0.003066093		
4D3/2			2.305275205	0.000465901	-0.000057870		
4D5/2			2.251032987	0.000186401	-0.000060333		
4F5/2			1.655686491	0.000000658	-0.000000075		
4F7/2			1.623110362	0.000000244	-0.000000081		
5S1/2			1.030301901	0.001828548	-0.000233429		
5P1/2			0.921274422	0.002608714	-0.000368696		
5P3/2			0.844519044	0.001225701	-0.000368080		
6S1/2			0.307532930	0.000135886	-0.000017353		
2S1/2 -- (2)	640.975034	-1267.055167	10.538145177	0.081292794		-0.096133651	0.002518125
2P1/2			10.381944341	0.024885324	-0.000057060		
2P3/2			9.898130989	0.039658387	-0.000575431		
3S1/2			4.966019054	0.009302668	-0.002276333		
3P1/2			5.377253275	0.015178989	-0.002388246		
3P3/2			5.097282095	0.012342334	-0.001566959		
3D3/2			5.611822273	0.010098563	-0.001398019		
3D5/2			5.497747228	0.004467489	-0.001381599		
4S1/2			2.421790747	0.002214592	-0.000569257		
4P1/2			2.446621399	0.003535525	-0.000572964		
4P3/2			2.307733875	0.002795288	-0.000390424		
4D3/2			2.232784212	0.001699877	-0.000247942		
4D5/2			2.186690490	0.000782565	-0.000246247		
4F5/2			1.654438896	0.000057774	-0.000007645		
4F7/2			1.621972289	0.000020747	-0.000007335		
5S1/2			0.996189455	0.000353581	-0.000091648		
5P1/2			0.891925985	0.000451544	-0.000073524		
5P3/2			0.823142395	0.000335833	-0.000047632		
6S1/2			0.305000533	0.000026269	-0.000006816		
2P1/2 -- (2)	640.459992	-1266.047221	12.782794922	0.184511718		-0.007233827	0.000283927
2P3/2			11.579049220	0.026880360	-0.000027289		
3S1/2			5.245021444	0.006350822	-0.000463275		
3P1/2			5.366712312	0.014447582	-0.002183146		
3P3/2			5.294634986	0.005905419	-0.000162333		
3D3/2			5.607279852	0.030290986	-0.007211960		
3D5/2			5.651361239	0.000979778	-0.000218306		
4S1/2			2.481924364	0.001501864	-0.000121426		
4P1/2			2.450307835	0.003130989	-0.000516769		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM	4F12	Z=68 A=166 R=1.24630E-04 A.U.					
4P3/2			2.349666914	0.001307829	-0.000042181		
4D3/2			2.233685812	0.005388726	-0.001318994		
4D5/2			2.214630401	0.000202748	-0.000042474		
4F5/2			1.654663171	0.000069648	-0.000014603		
4F7/2			1.622565754	0.000003882	-0.000001465		
5S1/2			1.005615771	0.000239469	-0.000019739		
5P1/2			0.892517348	0.000395163	-0.000066181		
5P3/2			0.828131755	0.000156646	-0.000005187		
6S1/2			0.305699266	0.000017788	-0.000001470		
2P3/2 -- (4)	514.774385	-1098.043998	11.201402953	0.097428170		-0.000593174	0.000052956
3S1/2			5.166670125	0.008126973	-0.000559934		
3P1/2			5.497895759	0.005031689	-0.000218534		
3P3/2			5.105371227	0.011152239	-0.001011257		
3D3/2			5.707370387	0.008966912	-0.000895550		
3D5/2			5.490828802	0.015097293	-0.004287104		
4S1/2			2.463734378	0.001851777	-0.000139126		
4P1/2			2.472336734	0.001103929	-0.000055436		
4P3/2			2.311926110	0.002369525	-0.000237110		
4D3/2			2.250353864	0.001587598	-0.000160184		
4D5/2			2.186976490	0.002602952	-0.000761077		
4F5/2			1.654747203	0.000041734	-0.000004118		
4F7/2			1.621983848	0.000036031	-0.000011588		
5S1/2			1.002723616	0.000293189	-0.000022409		
5P1/2			0.895162688	0.000139662	-0.000007191		
5P3/2			0.823689293	0.000281805	-0.000028652		
6S1/2			0.305484502	0.000021760	-0.000001667		
3S1/2 -- (2)	198.923953	-463.543261	3.990088323	0.004846264		-0.020910291	0.000544017
3P1/2			3.649284101	0.001724526	-0.000035402		
3P3/2			3.529619488	0.002595386	-0.000143263		
3D3/2			4.012055134	0.001588012	-0.000048483		
3D5/2			3.974411527	0.002136197	-0.000055548		
4S1/2			2.136736623	0.000734218	-0.000262553		
4P1/2			2.165504263	0.000905136	-0.000159195		
4P3/2			2.056142381	0.000796523	-0.000096268		
4D3/2			2.005628252	0.000392355	-0.000037828		
4D5/2			1.972256612	0.000390207	-0.000033999		
4F5/2			1.611819272	0.000222364	-0.000031013		
4F7/2			1.581954928	0.000098831	-0.000029883		
5S1/2			0.953066983	0.000116775	-0.000043129		
5P1/2			0.857167835	0.000120026	-0.000021715		
5P3/2			0.793781804	0.000098704	-0.000012698		
6S1/2			0.301816027	0.000008670	-0.000003212		
3P1/2 -- (2)	195.455100	-458.166648	4.193838178	0.009516189		-0.001746676	0.000067858
3P3/2			3.859146753	0.001359629	-0.000004006		
3D3/2			3.909400104	0.003472172	-0.000216227		
3D5/2			4.152068410	0.001600613	-0.000009000		
4S1/2			2.198389314	0.000649321	-0.000080028		
4P1/2			2.129596482	0.001002954	-0.000231543		

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM 4F12 Z=68 A=166 R=1.24630E-04 A.U.							
			2.083218144	0.000380677	-0.000019464		
			2.013872687	0.000944229	-0.000143134		
			1.989861926	0.000257120	-0.000009125		
			1.606808450	0.000377652	-0.000082659		
			1.590278823	0.000040361	-0.000008633		
			0.961576183	0.000100567	-0.000013191		
			0.853612173	0.000124960	-0.000030331		
			0.796786135	0.000045873	-0.000002607		
			0.302437720	0.000007444	-0.000000983		
3P3/2 -- (4)	165.454840	-415.153508	3.806710356	0.005258920		-0.000147692	0.000013050
			4.024647313	0.001196350	-0.000011474		
			3.858341341	0.002931700	-0.000069107		
			2.176040382	0.000882593	-0.000103829		
			2.170253187	0.000388613	-0.000027328		
			2.033876195	0.000777345	-0.000108906		
			2.003224907	0.000321191	-0.000029236		
			1.964768328	0.000745449	-0.000106545		
			1.611173272	0.000194212	-0.000019594		
			1.573841818	0.000182122	-0.000054639		
			0.958188397	0.000132986	-0.000016379		
			0.857643118	0.000048698	-0.000003783		
			0.791471971	0.000091140	-0.000013534		
			0.302187413	0.000009814	-0.000001215		
3D3/2 -- (4)	160.320598	-407.536180	4.351349452	0.008732369		-0.000001313	0.000000149
			4.355475888	0.001634561	-0.000000040		
			2.231632676	0.000363246	-0.000008761		
			2.200164462	0.000687192	-0.000045462		
			2.104466626	0.000264367	-0.000006578		
			2.009867804	0.000831770	-0.000075286		
			2.015110212	0.000274689	-0.000003745		
			1.602637068	0.000839705	-0.000207143		
			1.596140389	0.000026464	-0.000003278		
			0.966454676	0.000056306	-0.000001705		
			0.861510176	0.000081906	-0.000005753		
			0.799212225	0.000031140	-0.000000895		
			0.302795660	0.000004169	-0.000000130		
3D5/2 -- (6)	153.456844	-397.035584	4.279754595	0.007470788		-0.000000267	0.000000045
			2.224295164	0.000432365	-0.000008793		
			2.210386302	0.000299521	-0.000004246		
			2.089726475	0.000526472	-0.000021924		
			2.043271139	0.000225235	-0.000004007		
			1.982855062	0.000759434	-0.000048859		
			1.623907079	0.000174053	-0.000013070		
			1.577314451	0.000517872	-0.000143806		
			0.965331584	0.000065743	-0.000001708		
			0.862491957	0.000036695	-0.000000672		
			0.797603943	0.000059963	-0.000002726		
			0.302713497	0.000004857	-0.000000130		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM 4F12 Z=68 A=166 R=1.24630E-04 A.U.							
4S1/2 -- (2)	62.484379	-194.225945	1.764792286	0.000397015		-0.005062487	0.000131505
4P1/2			1.552453248	0.000199364	-0.000013651		
4P3/2			1.505498278	0.000235117	-0.000033146		
4D3/2			1.570684430	0.000176705	-0.000016762		
4D5/2			1.553821828	0.000155574	-0.000017797		
4F5/2			1.360476104	0.000096324	-0.000009730		
4F7/2			1.340883918	0.000083228	-0.000009621		
5S1/2			0.877741993	0.000044232	-0.000018765		
5P1/2			0.802712899	0.000029253	-0.000005760		
5P3/2			0.746992193	0.000025164	-0.000003765		
6S1/2			0.296426971	0.000003293	-0.000001430		
4P1/2 -- (2)	58.702545	-186.914228	1.736166609	0.000704131		-0.000410421	0.000015908
4P3/2			1.596329479	0.000096916	-0.000000509		
4D3/2			1.463137045	0.000397810	-0.000066805		
4D5/2			1.575771306	0.000095649	-0.000002533		
4F5/2			1.327946358	0.000152872	-0.000023447		
4F7/2			1.342619736	0.000056275	-0.000002603		
5S1/2			0.888351196	0.000054616	-0.000007881		
5P1/2			0.790016576	0.000044871	-0.000012250		
5P3/2			0.749223496	0.000015490	-0.000000976		
6S1/2			0.297118205	0.000003942	-0.000000587		
4P3/2 -- (4)	49.886289	-171.883729	1.578563821	0.000386533		-0.000034312	0.000003025
4D3/2			1.536468967	0.000115122	-0.000005179		
4D5/2			1.458394026	0.000243901	-0.000027405		
4F5/2			1.326414589	0.000071838	-0.000004607		
4F7/2			1.291477285	0.000104569	-0.000013087		
5S1/2			0.880941761	0.000072504	-0.000010435		
5P1/2			0.798890084	0.000018650	-0.000001545		
5P3/2			0.738481276	0.000032638	-0.000005331		
6S1/2			0.296599320	0.000005140	-0.000000759		
4D3/2 -- (4)	42.678790	-156.842451	1.506939468	0.000461396		-0.000000311	0.000000035
4D5/2			1.508360019	0.000087380	-0.000000004		
4F5/2			1.240119234	0.000219584	-0.000034829		
4F7/2			1.290396088	0.000046876	-0.000000600		
5S1/2			0.877128828	0.000025676	-0.000000792		
5P1/2			0.788920312	0.000047506	-0.000004785		
5P3/2			0.741442835	0.000013158	-0.000000519		
6S1/2			0.296349157	0.000001837	-0.000000068		
4D5/2 -- (6)	40.752369	-153.138082	1.484315276	0.000391748		-0.000000063	0.000000011
4F5/2			1.294515954	0.000057246	-0.000002063		
4F7/2			1.232730501	0.000169149	-0.000023310		
5S1/2			0.874265856	0.000030928	-0.000000770		
5P1/2			0.793027618	0.000015126	-0.000000270		
5P3/2			0.737256111	0.000029830	-0.000002142		
6S1/2			0.296155911	0.000002160	-0.000000067		
4F5/2 -- (6)	24.029884	-112.586793	1.128154628	0.000235662		-0.000000000	0.000000000
4F7/2			1.131910678	0.000035544	-0.000000000		
5S1/2			0.814990930	0.000013219	-0.000000169		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ERBIUM 4F12 Z=68 A=166 R=1.24630E-04 A.U.							
	5P1/2		0.738267510	0.000015325	-0.000000169		
	5P3/2		0.700486007	0.000007212	-0.000000024		
	6S1/2		0.292188709	0.000000933	-0.000000000		
4F7/2 -- (6)	23.233646	-110.371603	1.106045218	0.000212419		-0.000000000	0.000000000
	5S1/2		0.808908492	0.000016824	-0.000000183		
	5P1/2		0.742046591	0.000009977	-0.000000022		
	5P3/2		0.692508059	0.000013151	-0.000000080		
	6S1/2		0.291682432	0.000001144	-0.000000000		
5S1/2 -- (2)	12.361180	-72.448212	0.717284699	0.000021566		-0.000011353	0.000021069
	5P1/2		0.595353471	0.000019703	-0.000002516		
	5P3/2		0.571531422	0.000015391	-0.000003828		
	6S1/2		0.281230596	0.000001072	-0.000000455		
5P1/2 -- (2)	9.513357	-63.256184	0.634316302	0.000028686		-0.000052594	0.000002038
	5P3/2		0.576546426	0.000003874	-0.000000021		
	6S1/2		0.280607272	0.000001960	-0.000000281		
5P3/2 -- (4)	7.724796	-57.761578	0.565382094	0.000014872		-0.000004148	0.000000365
	6S1/2		0.277871355	0.000002349	-0.000000333		
6S1/2 -- (2)	1.098708	-21.089683	0.221515527	0.000000532		-0.0000060309	0.000001566
ETOT	-13081.11070	14439.68487	-32389.27835	4857.38526	14.305347334	-1.511748632	-1.744054513
THULIUM 4F13 Z=69 A=169 R=1.25376E-04 A.U.							
1S1/2 -- (2)	2897.348445	-5450.655428	47.373850989	4.631639449		-0.790052659	0.022399895
	2S1/2		14.564011585	0.239099236	-0.028113630		
	2P1/2		17.540391271	0.496240530	-0.070055406		
	2P3/2		15.564222560	0.237285475	-0.068616011		
	3S1/2		6.026358639	0.050273478	-0.006323507		
	3P1/2		6.572596405	0.096563850	-0.013593097		
	3P3/2		6.037409914	0.048404348	-0.014429220		
	3D3/2		6.106733530	0.002170847	-0.000267657		
	3D5/2		5.945353160	0.000874363	-0.000280673		
	4S1/2		2.693607656	0.012097061	-0.001542878		
	4P1/2		2.739640053	0.021743609	-0.003059212		
	4P3/2		2.536736504	0.010796035	-0.003238558		
	4D3/2		2.355792758	0.000495231	-0.000061318		
	4D5/2		2.298406922	0.000197842	-0.000064040		
	4F5/2		1.701738705	0.000000725	-0.000000082		
	4F7/2		1.666704573	0.000000269	-0.000000089		
	5S1/2		1.049588168	0.001923360	-0.000246023		
	5P1/2		0.938558958	0.002738631	-0.000385274		
	5P3/2		0.857276865	0.001279262	-0.000384195		
	6S1/2		0.311356349	0.000140570	-0.000017987		
2S1/2 -- (2)	667.056302	-1313.575538	10.738693970	0.085854613		-0.103679873	0.002801836
	2P1/2		10.585554295	0.026274780	-0.000058472		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THULIUM	4F13	Z=69 A=169 R=1.25376E-04 A.U.					
			10.075182606	0.041646080	-0.000628002		
			5.064780470	0.009862109	-0.002412726		
			5.488636322	0.016141589	-0.002538134		
			5.193903597	0.012982746	-0.001642826		
			5.722467664	0.010678225	-0.001477671		
			5.602521474	0.004718473	-0.001460135		
			2.472467066	0.002353614	-0.000604943		
			2.500396635	0.003770868	-0.000610709		
			2.353580395	0.002948896	-0.000410907		
			2.281343830	0.001803970	-0.000263110		
			2.232593902	0.000829612	-0.000261268		
			1.700420136	0.000063194	-0.000008361		
			1.665505983	0.000022644	-0.000008009		
			1.014719149	0.000373482	-0.000096799		
			0.908528158	0.000477506	-0.000077701		
			0.835671312	0.000350130	-0.000049548		
			0.308810534	0.000027289	-0.000007080		
2P1/2 -- (2)	666.468033	-1312.500525	13.038550335	0.194931947		-0.008088771	0.000326947
			11.789218644	0.028161879	-0.000030574		
			5.351522675	0.006730280	-0.000490162		
			5.478400452	0.015333875	-0.002316886		
			5.396381227	0.006227526	-0.000171001		
			5.718573357	0.032017985	-0.007623423		
			5.759434101	0.001032145	-0.000230511		
			2.534427754	0.001595774	-0.000128870		
			2.504344762	0.003333270	-0.000550269		
			2.396696814	0.001382692	-0.000044575		
			2.282412008	0.005720282	-0.001400439		
			2.261253733	0.000214562	-0.000045047		
			1.700660341	0.000076059	-0.000015950		
			1.666132619	0.000004229	-0.000001596		
			1.024372870	0.000252894	-0.000020823		
			0.909151449	0.000417130	-0.000069877		
			0.840740827	0.000163661	-0.000005417		
			0.309514316	0.000018475	-0.000001525		
2P3/2 -- (4)	531.757570	-1132.683192	11.386698492	0.102153319		-0.000647987	0.000059697
			5.268414801	0.008596365	-0.000596313		
			5.609609096	0.005322074	-0.000232208		
			5.199952257	0.011751975	-0.01067728		
			5.818604273	0.009480572	-0.000945576		
			5.593725557	0.015946651	-0.004528623		
			2.515083477	0.001962327	-0.000148339		
			2.526249993	0.001170976	-0.000059074		
			2.357406647	0.002501778	-0.000250906		
			2.299105375	0.001683676	-0.000169647		
			2.232598348	0.002756982	-0.000806373		
			1.700737488	0.000045873	-0.000004524		
			1.665508334	0.000039513	-0.000012713		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THULIUM 4F13 Z=69 A=169 R=1.25376E-04 A.U.							
5S1/2			1.021315881	0.000308759	-0.000023741		
5P1/2			0.911754397	0.000146885	-0.000007597		
5P3/2			0.836169852	0.000294000	-0.000029960		
6S1/2			0.309291062	0.000022536	-0.000001737		
3S1/2 -- (2)	207.612867	-480.940486	4.069575476	0.005147911		-0.022654649	0.000607994
3P1/2			3.723887489	0.001826505	-0.000036482		
3P3/2			3.597854103	0.002744618	-0.000154886		
3D3/2			4.092122000	0.001681912	-0.000051137		
3D5/2			4.052511961	0.002261831	-0.000058863		
4S1/2			2.180872988	0.000782123	-0.000279621		
4P1/2			2.212196138	0.000971254	-0.000170733		
4P3/2			2.096699395	0.000840165	-0.000101588		
4D3/2			2.048845104	0.000418959	-0.000040464		
4D5/2			2.013579761	0.000414983	-0.000036246		
4F5/2			1.655827472	0.000241059	-0.000033625		
4F7/2			1.623742505	0.000107124	-0.000032352		
5S1/2			0.970871188	0.000123636	-0.000045650		
5P1/2			0.873192516	0.000127652	-0.000023078		
5P3/2			0.806045058	0.000102913	-0.000013241		
6S1/2			0.305625731	0.00009027	-0.000003344		
3P1/2 -- (2)	204.077690	-475.497900	4.280925489	0.010118526		-0.001963891	0.000078545
3P3/2			3.935183671	0.001430210	-0.000004534		
3D3/2			3.989062693	0.003683179	-0.000230011		
3D5/2			4.235285103	0.001695347	-0.000009624		
4S1/2			2.244273565	0.000689772	-0.000084956		
4P1/2			2.175658175	0.001070550	-0.000247268		
4P3/2			2.124645439	0.000401974	-0.000020631		
4D3/2			2.057556480	0.001006419	-0.000152703		
4D5/2			2.031820977	0.000273530	-0.000009717		
4F5/2			1.650723420	0.000409451	-0.000089639		
4F7/2			1.632503207	0.000043799	-0.000009348		
5S1/2			0.979574222	0.000106222	-0.000013925		
5P1/2			0.869611001	0.000132260	-0.000032115		
5P3/2			0.809110865	0.000047884	-0.000002730		
6S1/2			0.306251232	0.000007733	-0.000001021		
3P3/2 -- (4)	171.804883	-429.360836	3.877878022	0.005558768		-0.000162427	0.000014805
3D3/2			4.102129884	0.001263107	-0.000011765		
3D5/2			3.931773520	0.003097547	-0.000071700		
4S1/2			2.220653364	0.000940641	-0.000111139		
4P1/2			2.216544464	0.000414407	-0.000029273		
4P3/2			2.073596965	0.000824000	-0.000115654		
4D3/2			2.045978549	0.000344173	-0.000031417		
4D5/2			2.005522567	0.000795148	-0.000114283		
4F5/2			1.654994403	0.000210515	-0.000021232		
4F7/2			1.615129465	0.000197267	-0.000059122		
5S1/2			0.976015400	0.000140795	-0.000017410		
5P1/2			0.873613790	0.000051475	-0.000004014		
5P3/2			0.803670749	0.000095472	-0.000014201		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THULIUM 4F13 Z=69 A=169 R=1.25376E-04 A.U.							
3D3/2 -- (4)	166.652372	-421.746836	0.305992618	0.000010219	-0.000001270	-0.000001503	0.000000176
3D5/2			4.438345616	0.009250902			
4S1/2			4.441117160	0.001729781	-0.000000045		
4P1/2			2.277956956	0.000385897	-0.000009343		
4P3/2			2.247677163	0.000731755	-0.000048609		
4D3/2			2.146063732	0.000280085	-0.000006977		
4D5/2			2.053275884	0.000884514	-0.000080430		
4F5/2			2.057439783	0.000291891	-0.000003996		
4F7/2			1.646345732	0.000911326	-0.000224836		
5S1/2			1.638583369	0.000028767	-0.000003553		
5P1/2			0.984484509	0.000059453	-0.000001807		
5P3/2			0.877600225	0.000086468	-0.000006098		
6S1/2			0.811526564	0.000032608	-0.000000938		
3D5/2 -- (6)	159.307736	-410.540075	0.306606454	0.000004329	-0.000000135	-0.000000304	0.000000053
4S1/2			4.362466126	0.007902945			
4P1/2			2.270214690	0.000458957	-0.000009378		
4P3/2			2.2578664239	0.000318473	-0.000004538		
4D3/2			2.130819377	0.000557233	-0.000023219		
4D5/2			2.087209590	0.000239425	-0.000004284		
4F5/2			2.024283872	0.000805855	-0.000052103		
4F7/2			1.668459926	0.000189013	-0.000014181		
5S1/2			1.618919355	0.000561188	-0.000155829		
5P1/2			0.983306466	0.000069358	-0.000001810		
5P3/2			0.878563069	0.000038684	-0.000000712		
6S1/2			0.809880721	0.000062729	-0.000002855		
4S1/2 -- (2)	65.332870	-201.547931	0.306520762	0.000005040	-0.000000135	-0.005499838	0.000147368
4P1/2			1.801371467	0.000423077			
4P3/2			1.585481476	0.000210952	-0.000014243		
4D3/2			1.535882545	0.000250246	-0.000035690		
4D5/2			1.604109447	0.000187760	-0.000017757		
4F5/2			1.586297237	0.000165515	-0.000018897		
4F7/2			1.395199068	0.000103183	-0.000010354		
5S1/2			1.374197459	0.000089566	-0.000010236		
5P1/2			0.894424669	0.000046838	-0.000019844		
5P3/2			0.817970275	0.000031162	-0.000006123		
6S1/2			0.758912255	0.000026211	-0.000003944		
4P1/2 -- (2)	61.449678	-194.094727	0.300244820	0.000003429	-0.000001487	-0.000463147	0.000018480
4P3/2			1.773836991	0.000751933			
4D3/2			1.629231641	0.000102116	-0.000000579		
4D5/2			1.494939187	0.000423973	-0.000071179		
4F5/2			1.609364835	0.000101754	-0.000002707		
4F7/2			1.362222573	0.000163942	-0.000024988		
5S1/2			1.376413923	0.000060715	-0.000002775		
5P1/2			0.905321296	0.000057556	-0.000008295		
5P3/2			0.805149783	0.000047537	-0.000012959		
6S1/2			0.761248786	0.000016131	-0.000001020		
4P3/2 -- (4)	51.915651	-177.924659	0.300944702	0.000004088	-0.000000608	-0.000037839	0.000003441
			1.609473940	0.000409937			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
THULIUM 4F13 Z=69 A=169 R=1.25376E-04 A.U.								
			1.568254315	0.000121682	-0.000005404			
			1.488087587	0.000258610	-0.000028758			
			1.359343301	0.000076691	-0.000004867			
			1.322694871	0.000112066	-0.000013827			
			0.897530368	0.000076943	-0.000011088			
			0.813964118	0.000019765	-0.000001642			
			0.750258876	0.000034218	-0.000005581			
			0.300407911	0.000005365	-0.000000793			
4D3/2 -- (4)	44.552774	-162.637664	1.539659067	0.000491938		-0.000000358	0.000000042	
			1.540574353	0.000092954	-0.000000005			
			1.271847115	0.000234679	-0.000036901			
			1.322586375	0.000050549	-0.000000636			
			0.893949683	0.000027161	-0.000000838			
			0.804045651	0.000050263	-0.0000005063			
			0.753431511	0.000013782	-0.000000542			
			0.300177590	0.000001912	-0.000000071			
4D5/2 -- (6)	42.473666	-158.660845	1.515511480	0.000416835		-0.000000072	0.000000013	
			1.327198499	0.000061223	-0.0000002178			
			1.263069964	0.000180875	-0.000024629			
			0.890942779	0.000032707	-0.000000814			
			0.808142036	0.000015995	-0.000000286			
			0.749157965	0.000031239	-0.000002235			
			0.299977808	0.000002248	-0.000000070			
4F5/2 -- (6)	25.362914	-117.420092	1.160262621	0.000255995		-0.000000000	0.000000000	
			1.163427204	0.000038584	-0.000000000			
			0.832235335	0.000014059	-0.000000173			
			0.753756226	0.000016287	-0.000000172			
			0.713058170	0.000007612	-0.000000024			
			0.296114869	0.000000977	-0.000000030			
4F7/2 -- (7)	24.485782	-115.002722	1.136149354	0.000230167		-0.000000000	0.000000000	
			0.825751869	0.000017885	-0.000000189			
			0.757268000	0.000010602	-0.000000023			
			0.704828064	0.000013861	-0.000000080			
			0.295582250	0.000001197	-0.000000000			
5S1/2 -- (2)	12.839664	-74.916739	0.730667060	0.000022787		-0.0000876107	0.000023467	
			0.606458443	0.000020711	-0.0000002639			
			0.581176045	0.000016258	-0.0000004061			
			0.284982409	0.000001111	-0.0000000469			
5P1/2 -- (2)	9.873573	-65.400498	0.646141552	0.000030303		-0.000058855	0.000002347	
			0.586286362	0.000004029	-0.0000000024			
			0.284362042	0.000002026	-0.000000289			
5P3/2 -- (4)	7.947476	-59.495411	0.574051802	0.000015548		-0.0000004520	0.000000411	
			0.281488336	0.000002439	-0.0000000344			
6S1/2 -- (2)	1.122208	-21.665954	0.224347818	0.000000951		-0.0000064046	0.000001715	
ETOT	-13562.57865	15019.15193	-33641.73097	5048.35969	15.049346208	-1.591547431	-1.870224458	0.053131864

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
1S1/2 -- (2)	3003.939821	-5637.809729	48.234778183	4.850885550		-0.845214552	0.024725890
2S1/2			14.846304176	0.251299446	-0.029603784		
2P1/2			17.901288948	0.521569368	-0.073328145		
2P3/2			15.820689878	0.248313174	-0.071803858		
3S1/2			6.150383958	0.053030457	-0.006683138		
3P1/2			6.715559957	0.101844772	-0.014270507		
3P3/2			6.151260692	0.050956906	-0.015190602		
3D3/2			6.225954702	0.002292193	-0.000281694		
3D5/2			6.056349227	0.000922240	-0.000296030		
4S1/2			2.750776827	0.012790773	-0.001634592		
4P1/2			2.801295253	0.022998541	-0.003220534		
4P3/2			2.586636617	0.011390305	-0.003417061		
4D3/2			2.406240580	0.000525574	-0.000064863		
4D5/2			2.345587357	0.000209649	-0.000067864		
4F5/2			1.747213159	0.000000794	-0.000000090		
4F7/2			1.709587747	0.000000295	-0.000000097		
5S1/2			1.068964625	0.002021614	-0.000259107		
5P1/2			0.955945587	0.002872969	-0.000402261		
5P3/2			0.869967216	0.001334056	-0.000400680		
6S1/2			0.315073574	0.000145583	-0.000018666		
2S1/2 -- (2)	694.000311	-1361.381845	10.941313452	0.090622537		-0.111756484	0.003113444
2P1/2			10.791529963	0.027727170	-0.000059895		
2P3/2			10.253386166	0.043705127	-0.000685234		
3S1/2			5.164335678	0.010447621	-0.002555317		
3P1/2			5.601005540	0.017151300	-0.002695148		
3P3/2			5.290871642	0.013642503	-0.001720324		
3D3/2			5.833464097	0.011280153	-0.001560315		
3D5/2			5.707424658	0.004978449	-0.001541596		
4S1/2			2.523439704	0.002499181	-0.000642272		
4P1/2			2.554512992	0.004017892	-0.000650275		
4P3/2			2.399420297	0.003107230	-0.000431883		
4D3/2			2.329850822	0.001912155	-0.000278861		
4D5/2			2.278337595	0.000878355	-0.000276858		
4F5/2			1.745824436	0.000068857	-0.000039108		
4F7/2			1.708329951	0.000024617	-0.000008709		
5S1/2			1.033329462	0.000394229	-0.000102164		
5P1/2			0.925220141	0.000504607	-0.000082054		
5P3/2			0.848138381	0.000364687	-0.000051484		
6S1/2			0.312509956	0.000028383	-0.000007363		
2P1/2 -- (2)	693.338789	-1360.241397	13.297486143	0.205829599		-0.009036253	0.000375868
2P3/2			12.000831648	0.029482508	-0.000034205		
3S1/2			5.458968578	0.007127446	-0.000518201		
3P1/2			5.591089461	0.016262824	-0.002456803		
3P3/2			5.498534459	0.006561244	-0.000179956		
3D3/2			5.830250589	0.033808693	-0.008050048		
3D5/2			5.867599228	0.001086037	-0.000243138		
4S1/2			2.587261301	0.001694129	-0.000136640		
4P1/2			2.558729542	0.003545483	-0.000585358		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
4P3/2			2.443729569	0.001460239	-0.000047046		
4D3/2			2.331092005	0.006064506	-0.001484987		
4D5/2			2.307708270	0.000226720	-0.000047710		
4F5/2			1.746080735	0.000082736	-0.000017353		
4F7/2			1.708989245	0.000004589	-0.000001733		
5S1/2			1.043214566	0.000266897	-0.000021950		
5P1/2			0.925875861	0.000440057	-0.000073727		
5P3/2			0.853287792	0.000170844	-0.000005651		
6S1/2			0.313220052	0.000019212	-0.000001584		
2P3/2 -- (4)	549.052311	-1167.909490	11.572413970	0.107031921		-0.000706969	0.000067174
3S1/2			5.370865634	0.009086514	-0.000634661		
3P1/2			5.722122646	0.005624859	-0.000246533		
3P3/2			5.294723098	0.012373048	-0.001126297		
3D3/2			5.930058027	0.010013481	-0.000997360		
3D5/2			5.696626980	0.016826564	-0.004778849		
4S1/2			2.566704181	0.002077684	-0.000158028		
4P1/2			2.580459904	0.001240902	-0.000062884		
4P3/2			2.402844303	0.002638576	-0.000265203		
4D3/2			2.347777192	0.001783241	-0.000179429		
4D5/2			2.278036726	0.002916307	-0.000853234		
4F5/2			1.746149375	0.000050235	-0.000004952		
4F7/2			1.708321675	0.000043167	-0.000013893		
5S1/2			1.039985962	0.000324934	-0.000025136		
5P1/2			0.928431272	0.000154377	-0.000008021		
5P3/2			0.848585501	0.000306467	-0.000031298		
6S1/2			0.312987657	0.000023369	-0.000001812		
3S1/2 -- (2)	216.580225	-498.786261	4.149646375	0.005464006		-0.024527179	0.000678504
3P1/2			3.799074989	0.001933224	-0.000037579		
3P3/2			3.666401878	0.002899977	-0.000167454		
3D3/2			4.172567244	0.001779942	-0.000053950		
3D5/2			4.130910389	0.002392577	-0.000062393		
4S1/2			2.225249778	0.000832334	-0.000297487		
4P1/2			2.259157034	0.001040922	-0.000182875		
4P3/2			2.137259629	0.000884859	-0.000107033		
4D3/2			2.092037622	0.000446575	-0.000043197		
4D5/2			2.054800991	0.000440704	-0.000038562		
4F5/2			1.699296691	0.000260535	-0.000036346		
4F7/2			1.664868668	0.000115735	-0.000034916		
5S1/2			0.988749665	0.000130795	-0.000048276		
5P1/2			0.889299793	0.000135636	-0.000024504		
5P3/2			0.818250723	0.000107165	-0.000013790		
6S1/2			0.309319282	0.000009410	-0.000003484		
3P1/2 -- (2)	212.978142	-493.277413	4.368704283	0.010750212		-0.002205603	0.000090747
3P3/2			4.011580884	0.001502849	-0.000005123		
3D3/2			4.069089038	0.003904082	-0.000244749		
3D5/2			4.318833664	0.001793856	-0.000010293		
4S1/2			2.290419745	0.000732081	-0.000090099		
4P1/2			2.221984793	0.001141538	-0.000263758		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
4P3/2			2.166084032	0.000423905	-0.000021839		
4D3/2			2.101219691	0.001070653	-0.000162551		
4D5/2			2.073678767	0.000290619	-0.000010329		
4F5/2			1.694109955	0.000442578	-0.000096912		
4F7/2			1.674060904	0.000047366	-0.000010092		
5S1/2			0.997648652	0.000112112	-0.000014688		
5P1/2			0.885691702	0.000139885	-0.000033975		
5P3/2			0.821377769	0.000049931	-0.000002856		
6S1/2			0.309949622	0.000008043	-0.000001061		
3P3/2 -- (4)	178.287576	-443.825690	3.949168088	0.005870084		-0.000178373	0.000016763
3D3/2			4.179738120	0.001332393	-0.000012059		
3D5/2			4.005260478	0.003269565	-0.000074387		
4S1/2			2.265469602	0.001001656	-0.000118867		
4P1/2			2.263053979	0.000441474	-0.000031322		
4P3/2			2.113285698	0.000872424	-0.000122662		
4D3/2			2.088666780	0.000368186	-0.000033699		
4D5/2			2.046137827	0.000846766	-0.000122336		
4F5/2			1.698253667	0.000227493	-0.000022937		
4F7/2			1.655740919	0.000213000	-0.000063776		
5S1/2			0.993911591	0.000148960	-0.000018494		
5P1/2			0.889661988	0.000054371	-0.000004257		
5P3/2			0.815809261	0.000099915	-0.000014885		
6S1/2			0.309682029	0.000010653	-0.000001330		
3D3/2 -- (4)	173.118090	-436.215666	4.525480752	0.009789908		-0.000001718	0.000000208
3D5/2			4.526811817	0.001828538	-0.000000051		
4S1/2			2.324497177	0.000409549	-0.000009952		
4P1/2			2.295419283	0.000778458	-0.000051930		
4P3/2			2.187628790	0.000296394	-0.000007391		
4D3/2			2.096620227	0.000939348	-0.000085789		
4D5/2			2.099624904	0.000309732	-0.000004257		
4F5/2			1.689508063	0.000986027	-0.000243291		
4F7/2			1.680339426	0.000031165	-0.000003839		
5S1/2			1.002584108	0.000062725	-0.000001912		
5P1/2			0.893768099	0.000091220	-0.000006459		
5P3/2			0.823778642	0.000034114	-0.000000983		
6S1/2			0.310301436	0.000004501	-0.000000141		
3D5/2 -- (6)	165.266975	-424.266550	4.445149566	0.008351087		-0.000000345	0.000000062
4S1/2			2.316332996	0.000486695	-0.000009990		
4P1/2			2.305556714	0.000338258	-0.000004843		
4P3/2			2.171867968	0.000589116	-0.000024564		
4D3/2			2.131069122	0.000254158	-0.000004573		
4D5/2			2.065559620	0.000853944	-0.000055473		
4F5/2			1.712446992	0.000204625	-0.000015340		
4F7/2			1.659846304	0.000606221	-0.000168328		
5S1/2			1.001349010	0.000073109	-0.000001916		
5P1/2			0.894710610	0.000040748	-0.000000753		
5P3/2			0.822094529	0.000065563	-0.000002987		
6S1/2			0.310212906	0.000005235	-0.000000141		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
4S1/2 -- (2)	68.268081	-209.041098	1.838135293	0.000450396		-0.005969864	0.000164878
4P1/2			1.618683335	0.000223043	-0.000014853		
4P3/2			1.566327828	0.000266113	-0.000038419		
4D3/2			1.637570744	0.000199329	-0.000018803		
4D5/2			1.618768257	0.000175848	-0.000020056		
4F5/2			1.429580580	0.000110319	-0.000011002		
4F7/2			1.407686977	0.000096146	-0.000010873		
5S1/2			0.911172666	0.000049557	-0.000020966		
5P1/2			0.833301014	0.000033164	-0.000006503		
5P3/2			0.770779974	0.000027266	-0.000004127		
6S1/2			0.303937101	0.000003575	-0.000001548		
4P1/2 -- (2)	64.282173	-201.444888	1.811707175	0.000892122		-0.000521955	0.000021423
4P3/2			1.662197805	0.000197451	-0.000000657		
4D3/2			1.526786531	0.000451488	-0.000075814		
4D5/2			1.642960082	0.000108074	-0.000002891		
4F5/2			1.396189921	0.000175482	-0.000026594		
4F7/2			1.409797098	0.000065329	-0.000002953		
5S1/2			0.922357785	0.000060611	-0.000038724		
5P1/2			0.820354405	0.000050320	-0.000013697		
5P3/2			0.773221735	0.000016778	-0.000001065		
6S1/2			0.304646502	0.000004245	-0.000000631		
4P3/2 -- (4)	53.983058	-184.065098	1.640345123	0.000434219		-0.000041659	0.000003905
4D3/2			1.599982463	0.000128478	-0.000005635		
4D5/2			1.517694902	0.000273866	-0.000030161		
4F5/2			1.391869444	0.000081709	-0.000005134		
4F7/2			1.353446284	0.000119815	-0.000014586		
5S1/2			0.914168550	0.000081601	-0.000011776		
5P1/2			0.829099718	0.000020932	-0.000001743		
5P3/2			0.761979464	0.000035838	-0.000005838		
6S1/2			0.304090379	0.000005607	-0.000000830		
4D3/2 -- (4)	46.463814	-168.529125	1.572313019	0.000523717		-0.000000411	0.000000050
4D5/2			1.572687817	0.000098730	-0.000000006		
4F5/2			1.303230007	0.000250337	-0.000039041		
4F7/2			1.354324667	0.000054360	-0.000000674		
5S1/2			0.910813441	0.000028706	-0.000000886		
5P1/2			0.819223762	0.000053142	-0.000005353		
5P3/2			0.765356755	0.000014421	-0.0000030564		
6S1/2			0.303878531	0.000001992	-0.000000074		
4D5/2 -- (6)	44.223085	-164.264830	1.546576019	0.000442845		-0.000000082	0.000000015
4F5/2			1.359479900	0.000065339	-0.000002297		
4F7/2			1.292960763	0.000192997	-0.000025986		
5S1/2			0.907656234	0.000034558	-0.000000860		
5P1/2			0.823308262	0.000016898	-0.000000301		
5P3/2			0.760993927	0.000032682	-0.000002329		
6S1/2			0.303671699	0.000002342	-0.000000072		
4F5/2 -- (6)	26.716261	-122.305052	1.191886971	0.000277179		-0.000000000	0.000000000
4F7/2			1.194386732	0.000041741	-0.000003000		
5S1/2			0.849390224	0.000014931	-0.000000178		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
YTTERBIUM 4F14 Z=70 A=174 R=1.26600E-04 A.U.							
5P1/2			0.769185574	0.000017287	-0.000000176		
5P3/2			0.725477002	0.000008022	-0.000000024		
6S1/2			0.299896211	0.000001023	-0.000000000		
4F7/2 -- (8)	25.752250	-119.671257	1.165644770	0.000248562		-0.000000000	0.000000000
5S1/2			0.842479237	0.000018983	-0.000000195		
5P1/2			0.772417333	0.000011248	-0.000000024		
5P3/2			0.716975739	0.000014586	-0.000000081		
6S1/2			0.299334833	0.000001253	-0.000000000		
5S1/2 -- (2)	13.330493	-77.434115	0.744099240	0.000024058		-0.000045394	0.000026101
5P1/2			0.617612610	0.000021758	-0.000002766		
5P3/2			0.590815926	0.000017165	-0.000004306		
6S1/2			0.288588398	0.000001154	-0.000000486		
5P1/2 -- (2)	10.243244	-67.587924	0.658026300	0.000031989		-0.000065792	0.000002699
5P3/2			0.596026483	0.000004187	-0.000000027		
6S1/2			0.287971049	0.000002095	-0.000000299		
5P3/2 -- (4)	8.171700	-61.250048	0.582684280	0.000016240		-0.000004919	0.000000461
6S1/2			0.284954514	0.000002536	-0.000000357		
6S1/2 -- (2)	1.147895	-22.242867	0.226892488	0.000000570		-0.000068098	0.000001880
ETOT	-14055.34999	15615.78047	-34928.06419	5244.73209	15.821534062	-1.674293142	-2.004361106
							0.058757569
LUTETIUM 5D1 Z=71 A=175 R=1.26843E-04 A.U.							
1S1/2 -- (2)	3113.714493	-5829.722363	49.105253430	5.077709766		-0.903821336	0.027259218
2S1/2			15.131777507	0.263964370	-0.031154191		
2P1/2			18.267204589	0.547840435	-0.076696514		
2P3/2			16.077681465	0.259657881	-0.075083077		
3S1/2			6.275267567	0.055891234	-0.007057144		
3P1/2			6.859632658	0.107311987	-0.014965381		
3P3/2			6.265010885	0.053590173	-0.015975807		
3D3/2			6.344816333	0.002416443	-0.000295970		
3D5/2			6.166726287	0.000971169	-0.000311723		
4S1/2			2.810208291	0.013532191	-0.001732743		
4P1/2			2.865946449	0.024346647	-0.003392794		
4P3/2			2.639610344	0.012034991	-0.003610656		
4D3/2			2.461725087	0.000559360	-0.000068802		
4D5/2			2.397996935	0.000222886	-0.000072151		
4F5/2			1.842685100	0.000000913	-0.000000103		
4F7/2			1.809830621	0.000000341	-0.000000112		
5S1/2			1.103413367	0.002196273	-0.000282056		
5P1/2			0.994982477	0.003176262	-0.000442562		
5P3/2			0.905727801	0.001481891	-0.000445115		
5D3/2			0.472397177	0.000018158	-0.000002235		
6S1/2			0.339705329	0.000177875	-0.000022852		
2S1/2 -- (2)	721.820259	-1410.495013	11.145885120	0.095600067		-3.120410542	0.003455414

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	5D1	Z=71 A=175 R=1.26843E-04 A.U.					
			2P1/2	10.999731186	0.029243678	-0.000061373	
			2P3/2	10.432545352	0.045834570	-0.000747636	
			3S1/2	5.264459454	0.011058557	-0.002703850	
			3P1/2	5.714032790	0.018205526	-0.002858812	
			3P3/2	5.387860875	0.014318434	-0.001798871	
			3D3/2	5.944282509	0.011901578	-0.001645553	
			3D5/2	5.811941341	0.005246021	-0.001625578	
			4S1/2	2.576241499	0.002655319	-0.000682262	
			4P1/2	2.611016551	0.004284519	-0.000692930	
			4P3/2	2.447870641	0.003278304	-0.000454431	
			4D3/2	2.383063833	0.002033476	-0.000296515	
			4D5/2	2.329008751	0.000933328	-0.000294454	
			4F5/2	1.841150947	0.000078660	-0.000010402	
			4F7/2	1.808435888	0.000028266	-0.000010004	
			5S1/2	1.065754293	0.000430105	-0.000111447	
			5P1/2	0.961833767	0.000561975	-0.000091321	
			5P3/2	0.882225748	0.000404552	-0.000056975	
			5D3/2	0.469895140	0.000063491	-0.000009324	
			6S1/2	0.336658576	0.000034825	-0.000009033	
2P1/2 --	(2)	721.077835 -1409.281020	13.559396358	0.217211998		-0.010085895	0.000431414
			2P3/2	12.213618982	0.030840620	-0.000038209	
			3S1/2	5.567106401	0.007541960	-0.000547334	
			3P1/2	5.704437728	0.017233211	-0.002602542	
			3P3/2	5.600738301	0.006905532	-0.000189155	
			3D3/2	5.941773047	0.035653611	-0.008489538	
			3D5/2	5.975291534	0.001141056	-0.000256111	
			4S1/2	2.642054371	0.001799676	-0.000144952	
			4P1/2	2.615514499	0.003774808	-0.000623190	
			4P3/2	2.493496087	0.001544333	-0.000049720	
			4D3/2	2.384489549	0.006449935	-0.001579642	
			4D5/2	2.359227169	0.000240380	-0.000050709	
			4F5/2	1.841437690	0.000094359	-0.000019793	
			4F7/2	1.809168818	0.000005260	-0.000001987	
			5S1/2	1.076220541	0.000291143	-0.000023916	
			5P1/2	0.962561202	0.000489273	-0.000081984	
			5P3/2	0.887799596	0.000189957	-0.000006281	
			5D3/2	0.469948072	0.000202941	-0.000049881	
			6S1/2	0.337504013	0.000023569	-0.000001941	
2P3/2 --	(4)	566.635597 -1203.698415	11.758247584	0.112058920		-0.000770324	0.000075452
			3S1/2	5.473766002	0.009596878	-0.000674970	
			3P1/2	5.835071761	0.005939360	-0.000261472	
			3P3/2	5.389341517	0.013013649	-0.001186738	
			3D3/2	6.041163195	0.010562923	-0.001050627	
			3D5/2	5.799005613	0.017732353	-0.005036439	
			4S1/2	2.620190614	0.002201152	-0.000168459	
			4P1/2	2.637055661	0.001316147	-0.000066992	
			4P3/2	2.450860796	0.002786881	-0.000280693	
			4D3/2	2.401205900	0.001894661	-0.000190370	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	5D1	Z=71 A=175 R=1.26843E-04 A.U.					
4D5/2			2.328373731	0.003095908	-0.000906056		
4F5/2			1.841499200	0.000057684	-0.000005683		
4F7/2			1.808414284	0.000049818	-0.000016040		
5S1/2			1.072693527	0.000353422	-0.000027509		
5P1/2			0.965198606	0.000170988	-0.000008925		
5P3/2			0.882644706	0.000340244	-0.000034827		
5D3/2			0.470468357	0.000059572	-0.000005995		
6S1/2			0.337218583	0.00028583	-0.000002230		
3S1/2 -- (2)	225.807693	-517.060015	4.230106554	0.005794032		-0.026536703	0.000756069
3P1/2			3.874628203	0.002044613	-0.000038715		
3P3/2			3.735049757	0.003061963	-0.000181063		
3D3/2			4.253080840	0.001881917	-0.000056955		
3D5/2			4.209300092	0.002527951	-0.000066172		
4S1/2			2.270950090	0.000886163	-0.000316637		
4P1/2			2.307866396	0.001116171	-0.000195986		
4P3/2			2.179760479	0.000932839	-0.000112889		
4D3/2			2.138871464	0.000477288	-0.000046233		
4D5/2			2.099882683	0.000469625	-0.000041149		
4F5/2			1.790231984	0.000295017	-0.000041173		
4F7/2			1.760648705	0.000131995	-0.000039783		
5S1/2			1.018897986	0.000142988	-0.000052767		
5P1/2			0.923335967	0.000151889	-0.000027428		
5P3/2			0.850099018	0.000118851	-0.000015366		
5D3/2			0.462309747	0.000015784	-0.000001621		
6S1/2			0.332888247	0.000011569	-0.000004284		
3P1/2 -- (2)	222.131848	-511.476124	4.456888389	0.011409845		-0.002474094	0.000104642
3P3/2			4.088069663	0.001577200	-0.000005777		
3D3/2			4.149117007	0.004134549	-0.000260590		
3D5/2			4.402350231	0.001895691	-0.000011013		
4S1/2			2.337995743	0.000777424	-0.000095610		
4P1/2			2.269989607	0.001218135	-0.000281549		
4P3/2			2.209538136	0.000447562	-0.000023152		
4D3/2			2.148566715	0.001141889	-0.000173443		
4D5/2			2.119486953	0.000309875	-0.000011017		
4F5/2			1.784707252	0.000501235	-0.000109805		
4F7/2			1.770831121	0.000054098	-0.000011503		
5S1/2			1.028295826	0.000122270	-0.000016015		
5P1/2			0.919512283	0.000155871	-0.000037882		
5P3/2			0.853493737	0.000055446	-0.000003186		
5D3/2			0.462631026	0.000038079	-0.000006095		
6S1/2			0.333636229	0.000009863	-0.000001301		
3P3/2 -- (4)	184.876752	-458.515746	4.020316737	0.006191761		-0.000195574	0.000018940
3D3/2			4.257120125	0.001403979	-0.000012364		
3D5/2			4.078457487	0.003447025	-0.000077209		
4S1/2			2.311617270	0.001067242	-0.000127222		
4P1/2			2.311258308	0.000470676	-0.000033541		
4P3/2			2.154819834	0.000924858	-0.000130266		
4D3/2			2.134931573	0.000394969	-0.000036244		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-NI)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	501	Z=71 A=175 R=1.26843E-04 A.U.					
4D5/2			2.090526695	0.000904638	-0.000131352		
4F5/2			1.788889772	0.000257536	-0.000325964		
4F7/2			1.750427649	0.000242718	-0.000072612		
5S1/2			1.024239962	0.000162812	-0.000020304		
5P1/2			0.923648065	0.000060509	-0.000004760		
5P3/2			0.847426238	0.000111327	-0.000016622		
5D3/2			0.462192247	0.000012929	-0.000001239		
6S1/2			0.333309708	0.000013089	-0.000001641		
3D3/2 -- (4)	179.682407	-450.897579	4.612269067	0.010346601		-0.000001957	0.000000244
3D5/2			4.612077661	0.001930280	-0.000000058		
4S1/2			2.372455619	0.000434822	-0.000010605		
4P1/2			2.344917283	0.000828796	-0.000055537		
4P3/2			2.231207455	0.000314056	-0.000007842		
4D3/2			2.143580149	0.001000538	-0.000091778		
4D5/2			2.145833021	0.000329777	-0.000004550		
4F5/2			1.779620734	0.001117823	-0.000275874		
4F7/2			1.777668325	0.000035673	-0.000004381		
5S1/2			1.033414219	0.000068369	-0.000002095		
5P1/2			0.928103902	0.000101345	-0.000007212		
5P3/2			0.856029691	0.000037999	-0.000001098		
5D3/2			0.462568987	0.000030510	-0.000002991		
6S1/2			0.334046275	0.000005516	-0.000000174		
3D5/2 -- (6)	171.300394	-438.170997	4.527336096	0.008812757		-0.000000390	0.000000072
4S1/2			2.363839840	0.000516294	-0.000010647		
4P1/2			2.355006492	0.000359503	-0.000005173		
4P3/2			2.214878994	0.000623599	-0.000026028		
4D3/2			2.178672630	0.000270597	-0.000004897		
4D5/2			2.110688103	0.000907936	-0.000059261		
4F5/2			1.804567908	0.000232139	-0.000017388		
4F7/2			1.755109256	0.000691172	-0.000191932		
5S1/2			1.032075945	0.000079604	-0.000002098		
5P1/2			0.929071635	0.000045209	-0.000000842		
5P3/2			0.854194999	0.000072929	-0.000003330		
5D3/2			0.463537423	0.000008366	-0.000000172		
6S1/2			0.333938418	0.000006408	-0.000000174		
4S1/2 -- (2)	71.398407	-216.866915	1.876283603	0.000480101		-0.006485034	0.000184461
4P1/2			1.653270305	0.000236057	-0.000015480		
4P3/2			1.598245014	0.000283497	-0.000041410		
4D3/2			1.673522673	0.000212096	-0.000019941		
4D5/2			1.653862593	0.000187473	-0.000021326		
4F5/2			1.498582072	0.000122649	-0.000012122		
4F7/2			1.480408038	0.000108607	-0.000012059		
5S1/2			0.937735149	0.000054289	-0.000022993		
5P1/2			0.863620471	0.000037412	-0.000007337		
5P3/2			0.799308050	0.000030336	-0.000004633		
5D3/2			0.450049034	0.000003824	-0.000000410		
6S1/2			0.326566972	0.000004405	-0.000001911		
4P1/2 -- (2)	67.322807	-209.156011	1.851322141	0.000857109		-0.000588589	0.000024831

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM	5D1	Z=71 A=175 R=1.26843E-04 A.U.					
4P3/2			1.696889621	0.000113297	-0.000000747		
4D3/2			1.561075874	0.000481834	-0.000080861		
4D5/2			1.679382030	0.000115265	-0.000003095		
4F5/2			1.463586418	0.000195193	-0.000029297		
4F7/2			1.483856491	0.000074125	-0.000003282		
5S1/2			0.949555529	0.000066050	-0.000009515		
5P1/2			0.849953251	0.000056204	-0.000015348		
5P3/2			0.802003248	0.000018633	-0.000001196		
5D3/2			0.448729572	0.000007141	-0.000001025		
6S1/2			0.327405317	0.000005196	-0.000000774		
4P3/2 -- (4)	56.226547	-190.532857	1.673049055	0.000461088		-0.000045906	0.000004434
4D3/2			1.634376255	0.000136008	-0.000005875		
4D5/2			1.549970478	0.000290975	-0.000031644		
4F5/2			1.457461016	0.000090413	-0.000005593		
4F7/2			1.422104850	0.000031344	-0.000015982		
5S1/2			0.940735266	0.000089533	-0.000012960		
5P1/2			0.859019174	0.000023415	-0.000001964		
5P3/2			0.789853059	0.000040028	-0.000006553		
5D3/2			0.448868698	0.000002768	-0.000000186		
6S1/2			0.326733298	0.000006900	-0.000001025		
4D3/2 -- (4)	48.606390	-174.879601	1.608436818	0.000560305		-0.000000474	0.000000059
4D5/2			1.608401939	0.000105446	-0.000000006		
4F5/2			1.365164952	0.000276436	-0.000042404		
4F7/2			1.424601071	0.000061710	-0.000000741		
5S1/2			0.937702429	0.000031416	-0.000000981		
5P1/2			0.848908870	0.000059261	-0.000005999		
5P3/2			0.793724138	0.000016096	-0.000000632		
5D3/2			0.445516934	0.000010781	-0.000000992		
6S1/2			0.326519404	0.000002448	-0.000000092		
4D5/2 -- (6)	46.203151	-170.334832	1.581307387	0.000473072		-0.000000094	0.000000017
4F5/2			1.424242212	0.000072422	-0.000002486		
4F7/2			1.358841764	0.000215220	-0.000028285		
5S1/2			0.934335332	0.000037756	-0.000000953		
5P1/2			0.853130426	0.000018817	-0.000000340		
5P3/2			0.789055159	0.000036427	-0.000002603		
5D3/2			0.447830110	0.000002865	-0.000000055		
6S1/2			0.326271840	0.000002870	-0.000000091		
4F5/2 -- (6)	29.299635	-130.830791	1.274383009	0.000324472		-0.000000000	0.000000000
4F7/2			1.281421806	0.000049364	-0.000000000		
5S1/2			0.886379493	0.000016749	-0.000000157		
5P1/2			0.806859234	0.000019697	-0.000000134		
5P3/2			0.760262512	0.000009199	-0.000000016		
5D3/2			0.436793690	0.000005621	-0.000000026		
6S1/2			0.322936332	0.000001294	-0.000000000		
4F7/2 -- (8)	28.384152	-128.498104	1.254323145	0.000293993		-0.000000000	0.000000000
5S1/2			0.881505198	0.000021479	-0.000000174		
5P1/2			0.811612078	0.000012937	-0.000000019		
5P3/2			0.753393528	0.000016740	-0.000000055		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LUTETIUM 5D1 Z=71 A=175 R=1.26843E-04 A.U.							
5D3/2			0.439541177	0.000002293	-0.000000000		
6S1/2			0.322566888	0.000001581	-0.000000000		
5S1/2 -- (2)	14.307651	-81.157974	0.767178168	0.000026532		-0.001054640	0.000029988
5P1/2			0.639337106	0.000023780	-0.000002994		
5P3/2			0.611969474	0.000019184	-0.000004806		
5D3/2			0.413272880	0.000006470	-0.000000878		
6S1/2			0.309025884	0.000001446	-0.000000620		
5P1/2 -- (2)	11.181263	-71.387279	0.683811354	0.000036078		-0.000077498	0.000003268
5P3/2			0.619502701	0.000004676	-0.000000033		
5D3/2			0.387371824	0.000016248	-0.000003770		
6S1/2			0.338557974	0.000002613	-0.000000376		
5P3/2 -- (4)	8.929677	-64.691934	0.605840844	0.000018346		-0.000005699	0.000000550
5D3/2			0.398035599	0.000004237	-0.000000392		
6S1/2			0.305207534	0.000003190	-0.000000456		
5D3/2 -- (1)	2.412873	-33.543356	0.000000000	0.000000000		-0.000000015	0.000000002
6S1/2			0.257606492	0.000000476	-0.000000010		
6S1/2 -- (2)	1.383162	-24.347126	0.244293858	0.000000720		-0.000085438	0.000002429
EDOT	-14559.64256	16230.42548	-36232.31212	5429.45979	16.627356847	-1.760647285	-2.147322192
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
1S1/2 -- (2)	3226.680594	-6026.406006	49.985224369	5.312192874		-0.965912088	0.030014652
2S1/2			15.420644365	0.277109920	-0.032767562		
2P1/2			18.638555676	0.575098946	-0.080163974		
2P3/2			16.335440178	0.271333160	-0.078457516		
3S1/2			6.401322699	0.058863543	-0.007446666		
3P1/2			7.005281865	0.112983336	-0.015679774		
3P3/2			6.379042203	0.056312428	-0.016787547		
3D3/2			6.463836862	0.002544289	-0.000310557		
3D5/2			6.276977854	0.001021425	-0.000327834		
4S1/2			2.870846021	0.014312440	-0.001836252		
4P1/2			2.932143208	0.025766890	-0.003572847		
4P3/2			2.693806632	0.012715039	-0.003814865		
4D3/2			2.518946860	0.000595272	-0.000072967		
4D5/2			2.452114624	0.000236969	-0.000076710		
4F5/2			1.932104412	0.000001040	-0.000000117		
4F7/2			1.900642891	0.000000389	-0.000000128		
5S1/2			1.140053616	0.002391990	-0.000307806		
5P1/2			1.035836513	0.003514543	-0.000487248		
5P3/2			0.942480080	0.001644924	-0.000494120		
5D3/2			0.542715697	0.000025445	-0.000003121		
6S1/2			0.358173285	0.000020460	-0.000026351		
2S1/2 -- (2)	750.554068	-1460.958857	11.352581035	0.100798022		-0.129662721	0.003830328
2P1/2			11.210382106	0.030827771	-0.000062867		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
2P3/2			10.612833110	0.048038159	-0.000815532		
3S1/2			5.365372613	0.011697091	-0.002858891		
3P1/2			5.828039927	0.019309437	-0.003029930		
3P3/2			5.485158342	0.015012942	-0.001878792		
3D3/2			6.055357011	0.012545200	-0.001733754		
3D5/2			5.916489910	0.005522382	-0.001712450		
4S1/2			2.630004586	0.002820490	-0.000724526		
4P1/2			2.668715654	0.004567682	-0.000738156		
4P3/2			2.497365410	0.003458013	-0.000477964		
4D3/2			2.437901898	0.002163080	-0.000315361		
4D5/2			2.381300357	0.000992058	-0.000313281		
4F5/2			1.930423550	0.000089086	-0.000011778		
4F7/2			1.899113513	0.000032083	-0.000011359		
5S1/2			1.100136468	0.000470435	-0.000121879		
5P1/2			1.000022686	0.000626410	-0.000101718		
5P3/2			0.917183951	0.000448395	-0.000062991		
5D3/2			0.539323506	0.000088810	-0.000013043		
6S1/2			0.354761255	0.000040245	-0.000010438		
2P1/2 -- (2)	749.737499	-1459.680784	13.824623358	0.229108163		-0.011247447	0.000494417
2P3/2			12.427829213	0.032237961	-0.000042622		
3S1/2			5.676192222	0.007975297	-0.000577661		
3P1/2			5.818779776	0.018249033	-0.002754742		
3P3/2			5.703311808	0.007261529	-0.000198635		
3D3/2			6.053584082	0.037560986	-0.008943872		
3D5/2			6.082966758	0.001197460	-0.000269488		
4S1/2			2.697888652	0.001911376	-0.000153717		
4P1/2			2.673506633	0.004018366	-0.000663296		
4P3/2			2.544386100	0.001633071	-0.000052534		
4D3/2			2.439522744	0.006861200	-0.001680630		
4D5/2			2.412411477	0.000254891	-0.000053910		
4F5/2			1.930741637	0.000106686	-0.000022382		
4F7/2			1.899919242	0.000005958	-0.000002251		
5S1/2			1.111251536	0.000318406	-0.000026122		
5P1/2			1.000829988	0.000544513	-0.000091246		
5P3/2			0.923215855	0.000211050	-0.000006976		
5D3/2			0.539401913	0.000283964	-0.000069816		
6S1/2			0.355709785	0.000027235	-0.000002240		
2P3/2 -- (4)	584.526579	-1240.071504	11.944420578	0.117241865		-0.000838345	0.000084607
3S1/2			5.577354629	0.010129211	-0.000717411		
3P1/2			5.948792049	0.006266803	-0.000277094		
3P3/2			5.484101920	0.013675858	-0.001249287		
3D3/2			6.152378480	0.011131375	-0.001105609		
3D5/2			5.901286002	0.018668086	-0.005302561		
4S1/2			2.674637139	0.002331388	-0.000179542		
4P1/2			2.694814911	0.001395635	-0.000071346		
4P3/2			2.499883385	0.002943219	-0.000297038		
4D3/2			2.456257304	0.002013381	-0.000202007		
4D5/2			2.380301458	0.003287542	-0.000962429		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM	502	Z=72 A=180 R=1.28039E-04 A.U.					
4F5/2			1.930792920	0.000065676	-0.000006467		
4F7/2			1.899075649	0.000056840	-0.000018308		
5S1/2			1.107389209	0.000385377	-0.000030185		
5P1/2			1.003548041	0.000189552	-0.000009940		
5P3/2			0.917565737	0.000377457	-0.000038724		
5D3/2			0.540086493	0.000083254	-0.000008366		
6S1/2			0.355379543	0.000032929	-0.000002585		
3S1/2 -- (2)	235.324437	-535.796944	4.311146825	0.006139358		-0.028690704	0.000841364
3P1/2			3.950759333	0.002161348	-0.000039871		
3P3/2			3.803992672	0.003228556	-0.000195777		
3D3/2			4.333933775	0.001988213	-0.000060147		
3D5/2			4.287946954	0.002668530	-0.000070203		
4S1/2			2.317364364	0.000943145	-0.000336894		
4P1/2			2.357462067	0.001196340	-0.000209945		
4P3/2			2.223042651	0.000982947	-0.000119013		
4D3/2			2.186963241	0.000510010	-0.000049465		
4D5/2			2.146241263	0.000500543	-0.000043898		
4F5/2			1.875131477	0.000331335	-0.000046261		
4F7/2			1.847128924	0.000148872	-0.000044830		
5S1/2			1.050741528	0.000156697	-0.000057817		
5P1/2			0.958704712	0.000170216	-0.000030725		
5P3/2			0.882658153	0.000131676	-0.000016975		
5D3/2			0.529073785	0.000022213	-0.000002288		
6S1/2			0.350563064	0.000013395	-0.000004960		
3P1/2 -- (2)	231.573967	-530.137397	4.545754861	0.012100548		-0.002772242	0.000120456
3P3/2			4.164894182	0.001653526	-0.000006503		
3D3/2			4.229459375	0.004375527	-0.000277559		
3D5/2			4.486150366	0.002001321	-0.000011786		
4S1/2			2.386346727	0.000825350	-0.000101428		
4P1/2			2.318852799	0.001299504	-0.000300436		
4P3/2			2.253811916	0.000472388	-0.000024540		
4D3/2			2.197193638	0.001217454	-0.000184963		
4D5/2			2.166608599	0.000330514	-0.000011750		
4F5/2			1.869292193	0.000563035	-0.000123401		
4F7/2			1.858285364	0.000061099	-0.000012968		
5S1/2			1.060692622	0.000133675	-0.000017507		
5P1/2			0.954648693	0.000173822	-0.000042273		
5P3/2			0.886341284	0.000061513	-0.000003553		
5D3/2			0.529519551	0.000053491	-0.000008575		
6S1/2			0.351399210	0.000011391	-0.000001503		
3P3/2 -- (4)	191.595411	-473.460092	4.091556345	0.006525091		-0.000214138	0.000021359
3D3/2			4.334575090	0.001478128	-0.000012675		
3D5/2			4.151656191	0.003630661	-0.0000380145		
4S1/2			2.358458438	0.001136869	-0.000136142		
4P1/2			2.360293027	0.000501686	-0.000035907		
4P3/2			2.197075043	0.000980240	-0.000138312		
4D3/2			2.182399437	0.000423653	-0.000038971		
4D5/2			2.136132467	0.000966489	-0.000141002		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM	502	Z=72 A=180 R=1.28039E-04 A.U.					
4F5/2			1.873445444	0.000289154	-0.000029150		
4F7/2			1.835797434	0.000273522	-0.000081760		
5S1/2			1.056278913	0.000178384	-0.000022347		
5P1/2			0.958954273	0.000067394	-0.000005328		
5P3/2			0.879732293	0.000123931	-0.000018546		
5D3/2			0.528894435	0.000018254	-0.000001754		
6S1/2			0.351023885	0.000015145	-0.000001908		
3D3/2 -- (4)	186.373093	-465.828948	4.699110232	0.010923703		-0.000002226	0.000000286
3D5/2			4.697311198	0.002035503	-0.000000065		
4S1/2			2.421155489	0.000461476	-0.000011297		
4P1/2			2.395281342	0.000882173	-0.000059391		
4P3/2			2.275576819	0.000332707	-0.000008320		
4D3/2			2.191765014	0.001065812	-0.000098186		
4D5/2			2.193349273	0.000351184	-0.000004865		
4F5/2			1.863694045	0.001256879	-0.0000310269		
4F7/2			1.865639509	0.000040384	-0.000004945		
5S1/2			1.066008599	0.000074696	-0.000002301		
5P1/2			0.963793155	0.000112672	-0.000008060		
5P3/2			0.889014101	0.000042290	-0.000001226		
5D3/2			0.529426787	0.000042707	-0.000004212		
6S1/2			0.351848881	0.000006366	-0.000000202		
3D5/2 -- (6)	177.433606	-452.287187	4.609411608	0.009290176		-0.000000440	0.000000084
4S1/2			2.412064148	0.000547470	-0.000011343		
4P1/2			2.405312283	0.000381943	-0.000005523		
4P3/2			2.258651634	0.000659965	-0.000027579		
4D3/2			2.227533461	0.000288120	-0.000005244		
4D5/2			2.157656609	0.000965522	-0.000063316		
4F5/2			1.890621356	0.000261199	-0.000019549		
4F7/2			1.841061182	0.000779327	-0.000216434		
5S1/2			1.064554767	0.000086873	-0.000002305		
5P1/2			0.964785061	0.000050191	-0.000000942		
5P3/2			0.887016012	0.000081044	-0.000003711		
5D3/2			0.530718820	0.000011711	-0.000000244		
6S1/2			0.351725109	0.000007386	-0.000000202		
4S1/2 -- (2)	74.671462	-224.944478	1.915120201	0.000511728		-0.007042814	0.000206182
4P1/2			1.688530707	0.000249802	-0.000016127		
4P3/2			1.630791079	0.000302066	-0.000044648		
4D3/2			1.710384805	0.000225714	-0.000021149		
4D5/2			1.689881526	0.000199916	-0.000022682		
4F5/2			1.562304883	0.000135225	-0.000013238		
4F7/2			1.545801402	0.000121354	-0.000013218		
5S1/2			0.965634141	0.000059650	-0.000025304		
5P1/2			0.894977599	0.000042293	-0.000008299		
5P3/2			0.828364745	0.000033748	-0.000005205		
5D3/2			0.512604010	0.000005347	-0.000000574		
6S1/2			0.343570820	0.000005113	-0.000002223		
4P1/2 -- (2)	70.510194	-217.128390	1.891759403	0.000915862		-0.000663355	0.000028748
4P3/2			1.732304196	0.000119455	-0.000000849		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 502 Z=72 A=180 R=1.28039E-04 A.U.							
403/2			1.596269155	0.000514309	-0.000086259		
405/2			1.716804869	0.000122974	-0.000003315		
4F5/2			1.525967306	0.000215322	-0.000031987		
4F7/2			1.550059495	0.000083205	-0.000003606		
5S1/2			0.978150370	0.000072191	-0.000010414		
5P1/2			0.880552337	0.000062854	-0.000017234		
5P3/2			0.831333263	0.000020685	-0.000001345		
5D3/2			0.510883843	0.000010016	-0.000001439		
6S1/2			0.344504143	0.000005994	-0.000000895		
4P3/2 -- (4)	58.570325	-197.199614	1.706443381	0.000489700		-0.000050553	0.000005029
403/2			1.669679602	0.000143999	-0.000006122		
405/2			1.583134684	0.000309241	-0.000033188		
4F5/2			1.517874387	0.000099207	-0.000006033		
4F7/2			1.483166269	0.000149312	-0.000017293		
5S1/2			0.968645058	0.000098538	-0.000014313		
5P1/2			0.889943693	0.000026234	-0.000002217		
5P3/2			0.818224537	0.000044694	-0.000007362		
5D3/2			0.510989680	0.000003904	-0.000000268		
6S1/2			0.343740415	0.000008003	-0.000001195		
4D3/2 -- (4)	50.865144	-181.466402	1.645699425	0.000599782		-0.000000545	0.000000070
405/2			1.645271762	0.000112694	-0.000000007		
4F5/2			1.422745633	0.000302721	-0.000045605		
4F7/2			1.487581157	0.000069321	-0.000000806		
5S1/2			0.965993642	0.000034486	-0.000001092		
5P1/2			0.879636155	0.000066185	-0.000006739		
5P3/2			0.822648306	0.000017962	-0.000000709		
5D3/2			0.506621829	0.000015156	-0.000001422		
6S1/2			0.343544277	0.000002835	-0.000000109		
4D5/2 -- (6)	48.292496	-176.632802	1.617192717	0.000505712		-0.000000107	0.000000020
4F5/2			1.484285994	0.000079629	-0.000002664		
4F7/2			1.417910501	0.000237408	-0.000030394		
5S1/2			0.962405672	0.000041366	-0.000001062		
5P1/2			0.883994039	0.000020978	-0.000000385		
5P3/2			0.817665004	0.000040590	-0.000002912		
5D3/2			0.509663720	0.000004028	-0.000000079		
6S1/2			0.343265868	0.000003317	-0.000000107		
4F5/2 -- (6)	31.889575	-139.111684	1.349566592	0.000374164		-0.000000000	0.000000000
4F7/2			1.359019551	0.000057331	-0.000000000		
5S1/2			0.921841845	0.000018730	-0.000000134		
5P1/2			0.843278576	0.000022359	-0.000000095		
5P3/2			0.793595487	0.000010495	-0.000000009		
5D3/2			0.497905311	0.000008078	-0.000000069		
6S1/2			0.340335780	0.000001534	-0.000000001		
4F7/2 -- (8)	30.961862	-136.846435	1.331805332	0.000340624		-0.000000000	0.000000000
5S1/2			0.917718081	0.000024109	-0.000000150		
5P1/2			0.848437145	0.000014736	-0.000000014		
5P3/2			0.787380669	0.000019031	-0.000000033		
5D3/2			0.501013759	0.000003242	-0.000000001		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAFNIUM 5D2 Z=72 A=180 R=1.28039E-04 A.U.							
5S1/2 -- (2)	15.397316	-85.134057	0.340021714	0.000001868	-0.000000000	-0.001179491	0.000034518
5P1/2			0.791416205	0.000029346			
5P3/2			0.661896194	0.000026004	-0.000003240		
5D3/2			0.633689768	0.000021457	-0.000005367		
6S1/2			0.464907188	0.000008781	-0.000001192		
5P1/2 -- (2)	12.216747	-75.404363	0.324672258	0.000001706	-0.000000742	-0.000091339	0.000003956
5P3/2			0.710334791	0.000040706			
5D3/2			0.643438757	0.000005213	-0.000000040		
6S1/2			0.433528190	0.000021809	-0.000005056		
5P3/2 -- (4)	9.751360	-68.279585	0.324388635	0.000003068	-0.000000446	-0.000006596	0.000000656
5D3/2			0.629234000	0.000020687			
6S1/2			0.446524754	0.000005627	-0.000000514		
5D3/2 -- (2)	3.220847	-39.079906	0.320817060	0.000003784	-0.000000548	-0.000000023	0.000000003
6S1/2			0.356680713	0.000006025			
6S1/2 -- (2)	1.571638	-26.049506	0.281566309	0.000006066	-0.000000005	-0.000100962	0.000002954
ETOT	-15075.30999	16863.03415	-37569.62747	5617.89715	17.464019987	-1.850262555	-2.299179265
							0.071603812
TANTALUM 5D3 Z=73 A=181 R=1.28276E-04 A.U.							
1S1/2 -- (2)	3343.065490	-6228.132996	50.875503954	5.554666309		-1.031869729	0.033011183
2S1/2			15.713132348	0.290758564	-0.034446554		
2P1/2			19.015594103	0.603375730	-0.083731815		
2P3/2			16.594013943	0.283342856	-0.081928350		
3S1/2			6.528655726	0.061952812	-0.007852426		
3P1/2			7.152616160	0.118865719	-0.016413710		
3P3/2			6.493407698	0.059125987	-0.017626279		
3D3/2			6.583080409	0.002675744	-0.000325454		
3D5/2			6.387161064	0.001073010	-0.000344370		
4S1/2			2.932591993	0.015132238	-0.001945225		
4P1/2			2.999724554	0.027259103	-0.003760417		
4P3/2			2.749000117	0.013429760	-0.004029445		
4D3/2			2.577459280	0.000633177	-0.000077340		
4D5/2			2.507458239	0.000251836	-0.000081523		
4F5/2			2.017315544	0.000001175	-0.000000131		
4F7/2			1.986204086	0.000000441	-0.000000145		
5S1/2			1.177876778	0.002604855	-0.000335866		
5P1/2			1.077522131	0.003881044	-0.000535291		
5P3/2			0.979443060	0.001820030	-0.000546753		
5D3/2			0.599474423	0.000032699	-0.000003996		
6S1/2			0.373932302	0.000229117	-0.000029555		
2S1/2 -- (2)	780.256864	-1512.839881	11.561546974	0.106227856		-0.139580176	0.004241331
2P1/2			11.423617153	0.032482662	-0.000064396		
2P3/2			10.794319979	0.050318262	-0.000889456		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	503	Z=73 A=181 R=1.28276E-24 A.U.					
3S1/2			5.467149163	0.012364681	-0.003020743		
3P1/2			5.943099330	0.020465105	-0.003208795		
3P3/2			5.582809123	0.015726112	-0.001960012		
3D3/2			6.166750362	0.013211724	-0.001825010		
3D5/2			6.021126522	0.005807763	-0.001802301		
4S1/2			2.684645595	0.002994958	-0.000769115		
4P1/2			2.727472685	0.004867669	-0.000786006		
4P3/2			2.547713613	0.003646042	-0.000502427		
4D3/2			2.493948527	0.002300634	-0.000335348		
4D5/2			2.434760558	0.001054343	-0.000333279		
4F5/2			2.015487443	0.000100120	-0.000013233		
4F7/2			1.984541091	0.000036100	-0.000012786		
5S1/2			1.135551119	0.000514503	-0.000133270		
5P1/2			1.038885013	0.000696843	-0.000113070		
5P3/2			0.952292068	0.000495328	-0.000069399		
5D3/2			0.595254347	0.000113958	-0.000016737		
6S1/2			0.370213769	0.000045241	-0.000011732		
2P1/2 -- (2)	779.356544	-1511.487869	14.093311964	0.241540695		-0.012533562	0.000565815
2P3/2			12.643516702	3.033674981	-0.000947483		
3S1/2			5.786307242	0.008428418	-0.000609239		
3P1/2			5.934183330	0.019312447	-0.002913677		
3P3/2			5.806300455	0.007629531	-0.000208402		
3D3/2			6.165742632	0.039532485	-0.009413449		
3D5/2			6.190679200	0.001255264	-0.000283279		
4S1/2			2.754676368	0.002029400	-0.000162948		
4P1/2			2.732567149	0.004276447	-0.000705708		
4P3/2			2.596140775	0.001726372	-0.000055485		
4D3/2			2.495774455	0.007297136	-0.001787678		
4D5/2			2.466796113	0.000270188	-0.000057300		
4F5/2			2.015837610	0.000119696	-0.000025114		
4F7/2			1.985419430	0.000006691	-0.000002529		
5S1/2			1.147359690	0.000348203	-0.000028529		
5P1/2			1.039778488	0.000604841	-0.000101352		
5P3/2			0.958801768	0.000233724	-0.000007722		
5D3/2			0.595360120	0.000364471	-0.000089634		
6S1/2			0.371249425	0.000030613	-0.000002515		
2P3/2 -- (4)	602.728538	-1277.032979	12.130955549	0.122583621		-0.000911308	0.000094717
3S1/2			5.681698380	0.010684594	-0.000762119		
3P1/2			6.063340657	0.006607719	-0.000293428		
3P3/2			5.579037322	0.014360242	-0.001314003		
3D3/2			6.263759968	0.011719400	-0.001162351		
3D5/2			6.003517532	0.019634592	-0.005577456		
4S1/2			2.729953204	0.002468528	-0.000191301		
4P1/2			2.753591404	0.001479393	-0.000075949		
4P3/2			2.549716852	0.003107418	-0.000314225		
4D3/2			2.512505079	0.002139029	-0.000214297		
4D5/2			2.433365360	0.003490489	-0.001022142		
4F5/2			2.015875388	0.000074212	-0.000007303		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	503	Z=73 A=181 R=1.28276E-04 A.U.					
4F7/2			1.984483858	0.000064300	-0.000020719		
5S1/2			1.143129866	0.000420181	-0.000333119		
5P1/2			1.042566757	0.000209717	-0.000011048		
5P3/2			0.952625295	0.000417384	-0.000042915		
5D3/2			0.596185394	0.000106723	-0.000010709		
6S1/2			0.370877697	0.000036899	-0.000002915		
3S1/2 -- (2)	245.147473	-555.018237	4.392825538	0.006500800		-0.031005384	0.000935147
3P1/2			4.027517540	0.002282794	-0.000041054		
3P3/2			3.873268991	0.003402752	-0.000211698		
3D3/2			4.415177448	0.002099026	-0.000063541		
3D5/2			4.366899440	0.002814512	-0.000074502		
4S1/2			2.364434803	0.001003376	-0.000358286		
4P1/2			2.407843135	0.001281543	-0.000224767		
4P3/2			2.266963383	0.001035045	-0.000125390		
4D3/2			2.235988934	0.000544648	-0.000052884		
4D5/2			2.193522483	0.000533368	-0.000046798		
4F5/2			1.955856323	0.000369470	-0.000051608		
4F7/2			1.928433897	0.000166528	-0.000050108		
5S1/2			1.083462160	0.000171690	-0.000063338		
5P1/2			0.994604884	0.000190347	-0.000034344		
5P3/2			0.915288692	0.000145365	-0.000018760		
5D3/2			0.582543155	0.000028664	-0.000002960		
6S1/2			0.365664612	0.000015085	-0.000005585		
3P1/2 -- (2)	241.317468	-549.277503	4.635353964	0.012823797		-0.003103483	0.000138438
3P3/2			4.242089755	0.001731848	-0.000007310		
3D3/2			4.310159667	0.004627504	-0.000295736		
3D5/2			4.570277127	0.002110869	-0.000012616		
4S1/2			2.435409244	0.000875933	-0.000107561		
4P1/2			2.368476711	0.001385754	-0.000320437		
4P3/2			2.298757341	0.000498342	-0.000026002		
4D3/2			2.246772098	0.001297084	-0.000197066		
4D5/2			2.214680924	0.000352483	-0.000012527		
4F5/2			1.949725123	0.000627946	-0.000137694		
4F7/2			1.940558727	0.000068431	-0.000014500		
5S1/2			1.094000182	0.000146124	-0.000019135		
5P1/2			0.990309436	0.000193446	-0.000047075		
5P3/2			0.919272588	0.000068010	-0.000003949		
5D3/2			0.583110270	0.000068893	-0.000011061		
6S1/2			0.366574038	0.000012797	-0.000001689		
3P3/2 -- (4)	198.447046	-488.663319	4.162914983	0.006870440		-0.000234156	0.000024045
3D3/2			4.412139235	0.001554917	-0.000012991		
3D5/2			4.224890857	0.003820652	-0.000083196		
4S1/2			2.405927877	0.001210692	-0.000145655		
4P1/2			2.410051662	0.000534548	-0.000038424		
4P3/2			2.239909497	0.001038542	-0.000146795		
4D3/2			2.230742892	0.000454197	-0.000041879		
4D5/2			2.182600072	0.001032154	-0.000151266		
4F5/2			1.953779202	0.000322326	-0.000032493		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	503	Z=73 A=181 R=1.28276E-04 A.U.					
4F7/2			1.915959852	0.000305716	-0.000091311		
5S1/2			1.089196668	0.000195418	-0.000024596		
5P1/2			0.994776738	0.000074912	-0.000005952		
5P3/2			0.912093414	0.000137499	-0.000020625		
5D3/2			0.582293982	0.000023632	-0.000002278		
6S1/2			0.366154308	0.000017046	-0.000002158		
3D3/2 -- (4)	193.193923	-481.014925	4.786052273	0.011521875		-0.000002527	0.000000334
3D5/2			4.782558894	0.002144309	-0.000000073		
4S1/2			2.470528486	0.000489539	-0.000012029		
4P1/2			2.446404289	0.000938648	-0.000063500		
4P3/2			2.320583563	0.000352335	-0.000008824		
4D3/2			2.240845712	0.001135007	-0.000104999		
4D5/2			2.241798062	0.000373886	-0.000005200		
4F5/2			1.943585342	0.001403134	-0.000346461		
4F7/2			1.948394103	0.000045341	-0.000005536		
5S1/2			1.099515225	0.000081586	-0.000002527		
5P1/2			1.000020691	0.000125007	-0.000008991		
5P3/2			0.922076559	0.000046910	-0.000001365		
5D3/2			0.582982335	0.000054830	-0.000005440		
6S1/2			0.367053229	0.000007146	-0.000000228		
3D5/2 -- (6)	183.669366	-466.618902	4.691420550	0.009783802		-0.000000496	0.000000098
4S1/2			2.460937386	0.000580253	-0.000012078		
4P1/2			2.456363129	0.000405587	-0.000005894		
4P3/2			2.303034615	0.000698186	-0.000029215		
4D3/2			2.277308860	0.000306679	-0.000005613		
4D5/2			2.204302425	0.001026508	-0.000067626		
4F5/2			1.972460677	0.000291793	-0.000021821		
4F7/2			1.921814151	0.000871562	-0.000242075		
5S1/2			1.097935898	0.000094778	-0.000002531		
5P1/2			1.001032677	0.000055604	-0.000001052		
5P3/2			0.919906483	0.000089757	-0.000004123		
5D3/2			0.584563793	0.000015035	-0.000000315		
6S1/2			0.366915062	0.000008280	-0.000000228		
4S1/2 -- (2)	78.087037	-233.271786	1.954572123	0.000545318		-0.007647431	0.000230253
4P1/2			1.724382913	0.000264295	-0.000016791		
4P3/2			1.663865962	0.000321845	-0.000048151		
4D3/2			1.747948261	0.000240177	-0.000022429		
4D5/2			1.726598050	0.000213147	-0.000024125		
4F5/2			1.622575852	0.000148112	-0.000014356		
4F7/2			1.606942121	0.000134556	-0.000014376		
5S1/2			0.994225265	0.000065552	-0.000027862		
5P1/2			0.926722781	0.000047744	-0.000009374		
5P3/2			0.857433078	0.000037429	-0.000005833		
5D3/2			0.562244063	0.000006864	-0.000000740		
6S1/2			0.358139679	0.000005775	-0.000002517		
4P1/2 -- (2)	73.841501	-225.355461	1.932905218	0.000978432		-0.000747194	0.000033240
4P3/2			1.768315615	0.000125905	-0.000000963		
4D3/2			1.632159910	0.000548925	-0.000092019		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM	5D3	Z=73 A=181 R=1.28276E-04 A.U.					
4D5/2			1.754980431	0.000131171	-0.000003551		
4F5/2			1.585109713	0.000235985	-0.000034688		
4F7/2			1.612073266	0.000092674	-0.00003931		
5S1/2			1.007475538	0.000078923	-0.000011404		
5P1/2			0.911530987	0.000070171	-0.000019327		
5P3/2			0.860689148	0.000022892	-0.000001509		
5D3/2			0.560187224	0.000012895	-0.000001857		
6S1/2			0.359150862	0.000006729	-0.000001008		
4P3/2 -- (4)	61.007241	-204.052087	1.740382392	0.000520019		-0.000055626	0.000005696
4D3/2			1.705655425	0.000152431	-0.0000306374		
4D5/2			1.616945942	0.000328612	-0.000034789		
4F5/2			1.574900690	0.000108147	-0.000006460		
4F7/2			1.540164243	0.000164521	-0.000018557		
5S1/2			0.997241985	0.000108487	-0.000015817		
5P1/2			0.921231096	0.000029350	-0.000002499		
5P3/2			0.846594755	0.000049757	-0.000008252		
5D3/2			0.560219706	0.000005058	-0.000000354		
6S1/2			0.358307146	0.000009034	-0.000001355		
4D3/2 -- (4)	53.226934	-188.262109	1.683779303	0.000642006		-0.000000626	0.000000083
4D5/2			1.682958562	0.000120442	-0.000000008		
4F5/2			1.477566527	0.000329430	-0.000048702		
4F7/2			1.546727713	0.000077276	-0.000000869		
5S1/2			0.995020937	0.000037863	-0.000001218		
5P1/2			0.910770551	0.000073808	-0.000007563		
5P3/2			0.851614045	0.000019986	-0.000000793		
5D3/2			0.555000117	0.000019551	-0.000001871		
6S1/2			0.358139805	0.000003195	-0.000000125		
4D5/2 -- (6)	50.476760	-183.128637	1.653882642	0.000540617		-0.000000122	0.000000024
4F5/2			1.541289933	0.000087004	-0.000002833		
4F7/2			1.473438495	0.000260002	-0.000032396		
5S1/2			0.991203310	0.000045327	-0.000001184		
5P1/2			0.915257618	0.000023346	-0.000000436		
5P3/2			0.846314149	0.000045099	-0.000003249		
5D3/2			0.558673240	0.000005196	-0.000000104		
6S1/2			0.357835529	0.000003729	-0.000000123		
4F5/2 -- (6)	34.495884	-147.264221	1.420094244	0.000426396		-0.000000000	0.000000000
4F7/2			1.431298467	0.000065714	-0.000000000		
5S1/2			0.956441291	0.000020877	-0.000000112		
5P1/2			0.878896395	0.000025267	-0.000000061		
5P3/2			0.825957935	0.000011904	-0.000000004		
5D3/2			0.546769142	0.000010629	-0.000000131		
6S1/2			0.355276374	0.000001761	-0.000000001		
4F7/2 -- (8)	33.535102	-144.993061	1.403497253	0.000389282		-0.000000000	0.000000000
5S1/2			0.952708408	0.000026899	-0.000000127		
5P1/2			0.884182246	0.000016660	-0.000000010		
5P3/2			0.820120043	0.000021474	-0.000000017		
5D3/2			0.550064804	0.000004205	-0.000000002		
6S1/2			0.354989397	0.000002140	-0.000000001		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TANTALUM 5D3 Z=73 A=181 R=1.28276E-04 A.U.							
5S1/2 -- (2)	16.571365	-89.290261	0.816229378	0.000032452		-0.001319257	0.000039706
5P1/2			0.684806343	0.000028392	-0.000003500		
5P3/2			3.655568696	0.000023958	-0.000005984		
5D3/2			0.505257523	0.000011008	-0.000001493		
6S1/2			0.338296038	0.000001957	-0.000000860		
5P1/2 -- (2)	13.325258	-79.571255	0.737091669	0.000045811		-0.000107418	0.000004776
5P3/2			0.667425486	0.000005786	-0.000000050		
5D3/2			0.469807546	0.000027159	-0.000006287		
6S1/2			0.338200752	0.000003500	-0.000000512		
5P3/2 -- (4)	10.617151	-71.958029	0.652514087	0.000023231		-0.000007604	0.000000778
5D3/2			0.484511936	0.000006934	-0.000000625		
6S1/2			0.334448861	0.000004365	-0.000000638		
5D3/2 -- (3)	3.979994	-43.767197	0.396153573	0.000008109		-0.000000033	0.000000004
6S1/2			0.300030782	0.000000737	-0.000000003		
6S1/2 -- (2)	1.736691	-27.587799	0.268043285	0.000000963		-0.000116075	0.000003493
ETOT	-15602.56166	17514.36757	-38940.91653	5809.98015	18.332337270	-1.943185417	-2.460910613
TUNGSTEN 5D4 Z=74 A=184 R=1.28981E-04 A.U.							
1S1/2 -- (2)	3462.897719	-6434.941020	51.776085263	5.805227570		-1.101775239	0.036266065
2S1/2			16.009299782	0.304921395	-0.036193188		
2P1/2			19.398522526	0.632702257	-0.087401178		
2P3/2			16.833420517	0.295691263	-0.085496665		
3S1/2			6.657306294	0.065161953	-0.008274910		
3P1/2			7.301722465	0.124965412	-0.017167559		
3P3/2			6.638137631	0.062032894	-0.018492841		
3D3/2			6.702589028	0.002810862	-0.000340652		
3D5/2			6.497310415	0.001125938	-0.000361327		
4S1/2			2.995376264	0.015992126	-0.002059773		
4P1/2			3.068601096	0.028824011	-0.003955405		
4P3/2			2.805058567	0.014179155	-0.004254432		
4D3/2			2.637009302	0.000673024	-0.000081910		
4D5/2			2.563763509	0.000267465	-0.000086581		
4F5/2			2.099347839	0.000001318	-0.000000147		
4F7/2			2.068058306	0.000000496	-0.000000163		
5S1/2			1.216421426	0.002833161	-0.000366031		
5P1/2			1.119636766	0.004272991	-0.000586237		
5P3/2			1.016312340	0.002005870	-0.000602616		
5D3/2			0.649591697	0.000040171	-0.000004892		
6S1/2			0.387989414	0.000252185	-0.000032596		
2S1/2 -- (2)	810.953107	-1566.168307	11.772821202	0.111897727		-0.150188897	0.004691410
2P1/2			11.639511066	0.034211147	-0.000065943		
2P3/2			10.977024046	0.052676956	-0.000969851		
3S1/2			5.569813625	0.013062406	-0.003189668		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN 5D4 Z=74 A=184 R=1.28981E-04 A.U.							
3P1/2			6.059263047	0.021675040	-0.003395754		
3P3/2			5.680836228	0.016458124	-0.002042495		
3D3/2			6.278498700	0.013901745	-0.001919391		
3D5/2			6.125880646	0.006102352	-0.001895195		
4S1/2			2.740104212	0.003178980	-0.000816097		
4P1/2			2.787208721	0.005185040	-0.000836541		
4P3/2			2.598802645	0.003842291	-0.000527774		
4D3/2			2.550967297	0.002446052	-0.000356460		
4D5/2			2.489141508	0.001120122	-0.000354434		
4F5/2			2.097372267	0.000111766	-0.000014767		
4F7/2			2.066262569	0.000040325	-0.000014288		
5S1/2			1.171576246	0.000562027	-0.000145545		
5P1/2			1.078055090	0.000772911	-0.000125313		
5P3/2			0.987273087	0.000544957	-0.000076139		
5D3/2			0.644569774	0.000139839	-0.000020536		
6S1/2			0.334032477	0.000050012	-0.000012967		
2P1/2 -- (2)	809.973147	-1564.748839	14.365599206	0.254532786		-0.013955940	0.000646633
2P3/2			12.860728099	0.035152099	-0.000052823		
3S1/2			5.897486845	0.008902112	-0.000642105		
3P1/2			6.050705530	0.020425631	-0.003079630		
3P3/2			5.919734959	0.008009796	-0.000218463		
3D3/2			6.278289038	0.041569499	-0.009898590		
3D5/2			6.298462436	0.001314467	-0.000297490		
4S1/2			2.812356276	0.002153941	-0.000172653		
4P1/2			2.792618234	0.004549507	-0.000750491		
4P3/2			2.648704728	0.001824241	-0.000058573		
4D3/2			2.553009147	0.007757392	-0.001900690		
4D5/2			2.522126774	0.000286238	-0.000060875		
4F5/2			2.097755225	0.000133386	-0.000027990		
4F7/2			2.067213429	0.000007458	-0.000002821		
5S1/2			1.184112543	0.000380345	-0.000031118		
5P1/2			1.079040442	0.000669935	-0.000112245		
5P3/2			0.994274240	0.000257810	-0.000008513		
5D3/2			0.644705444	0.000447332	-0.000110041		
6S1/2			0.385115002	0.000033839	-0.000002777		
2P3/2 -- (4)	621.244425	-1314.586714	12.317869242	0.128086978		-0.000989503	0.000105867
3S1/2			5.786819799	0.011263915	-0.000809201		
3P1/2			6.178764061	0.006962632	-0.000310502		
3P3/2			5.674172182	0.015067318	-0.001380941		
3D3/2			6.375344411	0.012327483	-0.001220889		
3D5/2			6.105730338	0.020632560	-0.005861316		
4S1/2			2.786074389	0.002612737	-0.000203761		
4P1/2			2.813301243	0.001567503	-0.000080808		
4P3/2			2.600246560	0.003279470	-0.000332256		
4D3/2			2.569707474	0.002271475	-0.000227223		
4D5/2			2.487316396	0.003704500	-0.001085125		
4F5/2			2.097776049	0.000083306	-0.000008193		
4F7/2			2.066182730	0.000072222	-0.000023280		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	504	Z=74 A=184 R=1.28981E-04 A.U.					
5S1/2			1.179485365	0.000457579	-0.000036297		
5P1/2			1.081885748	0.000231345	-0.000012243		
5P3/2			0.987545177	0.000459713	-0.000047371		
5D3/2			0.645655520	0.000130817	-0.000013108		
6S1/2			0.364703466	0.000040662	-0.000003233		
3S1/2 -- (2)	255.285696	-574.735J18	4.475161796	0.006878993		-0.033487831	0.001038149
3P1/2			4.104930952	0.002410054	-0.000042258		
3P3/2			3.942894797	0.003583919	-0.000228909		
3D3/2			4.496834372	0.002214516	-0.000067148		
3D5/2			4.446177180	0.002966056	-0.000079087		
4S1/2			2.412117266	0.001066954	-0.000380849		
4P1/2			2.458950519	0.001371982	-0.000240484		
4P3/2			2.311437410	0.001089073	-0.000132015		
4D3/2			2.285763930	0.000581173	-0.000056485		
4D5/2			2.241531660	0.000568076	-0.000049843		
4F5/2			2.033439052	0.000409467	-0.000057220		
4F7/2			2.006094860	0.000185016	-0.000055634		
5S1/2			1.116688220	0.000187876	-0.000069297		
5P1/2			1.030715862	0.000212199	-0.000038273		
5P3/2			0.947750332	0.000159794	-0.000020646		
5D3/2			0.629487839	0.000035357	-0.000003660		
6S1/2			0.379152753	0.000016704	-0.000006184		
3P1/2 -- (2)	251.374653	-568.911878	4.725727645	0.013581083		-0.003471047	0.000158857
3P3/2			4.319681592	0.001812177	-0.000008204		
3D3/2			4.391249644	0.004890973	-0.000315205		
3D5/2			4.654760767	0.002224443	-0.000013507		
4S1/2			2.485138377	0.000929241	-0.000114014		
4P1/2			2.418806110	0.001477045	-0.000341590		
4P3/2			2.344288416	0.000525404	-0.000027539		
4D3/2			2.297117266	0.001380635	-0.000209721		
4D5/2			2.263506785	0.000375780	-0.000013346		
4F5/2			2.027038212	0.000696042	-0.000152699		
4F7/2			2.019185463	0.000076114	-0.000016106		
5S1/2			1.127837531	0.000159536	-0.000020889		
5P1/2			1.026178462	0.000214645	-0.000052265		
5P3/2			0.952043831	0.000074884	-0.000004372		
5D3/2			0.630177214	0.000084808	-0.000013633		
6S1/2			0.380125770	0.000014137	-0.000001867		
3P3/2 -- (4)	205.434227	-504.128827	4.234408902	0.007228128		-0.000255722	0.000027021
3D3/2			4.489834773	0.001634414	-0.000013312		
3D5/2			4.298181615	0.004017149	-0.000086365		
4S1/2			2.453978032	0.001288870	-0.000155786		
4P1/2			2.460472436	0.000569323	-0.000041097		
4P3/2			2.283239229	0.001099786	-0.000155721		
4D3/2			2.279776042	0.000486603	-0.000044967		
4D5/2			2.229735029	0.001101589	-0.000162141		
4F5/2			2.030921986	0.000357088	-0.000035996		
4F7/2			1.992441277	0.000339403	-0.000101296		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	5D4	Z=74 A=184 R=1.28981E-04 A.U.					
5S1/2			1.122615040	0.000213814	-0.000027038		
5P1/2			1.030793348	0.000083020	-0.000006630		
5P3/2			0.944271699	0.000151938	-0.000022845		
5D3/2			0.629159091	0.000029248	-0.000002827		
6S1/2			0.379664084	0.000018866	-0.000002400		
3D3/2 -- (4)	200.147653	-496.459303	4.873125984	0.012141710		-0.000002863	0.000000390
3D5/2			4.867849377	0.002256784	-0.000000082		
4S1/2			2.520525308	0.000519047	-0.000012801		
4P1/2			2.498221988	0.000998310	-0.000067873		
4P3/2			2.366137515	0.000372948	-0.000009354		
4D3/2			2.290635398	0.001208084	-0.000112217		
4D5/2			2.290973945	0.000397863	-0.000005555		
4F5/2			2.020322973	0.001556756	-0.000384489		
4F7/2			2.027466185	0.000050559	-0.000006155		
5S1/2			1.133546292	0.000088993	-0.000002772		
5P1/2			1.036459239	0.000138274	-0.000010001		
5P3/2			0.954969452	0.000051824	-0.000001514		
5D3/2			0.630008336	0.000067307	-0.000006716		
6S1/2			0.380627410	0.000007886	-0.000000253		
3D5/2 -- (6)	190.009359	-481.168491	4.773389334	0.010294021		-0.000000558	0.000000113
4S1/2			2.510409677	0.000614679	-0.000012854		
4P1/2			2.508094587	0.000430461	-0.000006286		
4P3/2			2.347938514	0.000738268	-0.000030938		
4D3/2			2.327804034	0.000326262	-0.000006005		
4D5/2			2.252226534	0.001090831	-0.000072188		
4F5/2			2.051115185	0.000323957	-0.000024207		
4F7/2			1.998893537	0.000968180	-0.000268940		
5S1/2			1.131832522	0.000103259	-0.000002776		
5P1/2			1.037485688	0.000061410	-0.000001171		
5P3/2			0.952620609	0.000099003	-0.000004562		
5D3/2			0.631859757	0.000018457	-0.000000391		
6S1/2			0.380475714	0.000009126	-0.0000000253		
4S1/2 -- (2)	81.645280	-241.847759	1.994588903	0.000580928		-0.008301098	0.000256885
4P1/2			1.760776893	0.000279548	-0.000017472		
4P3/2			1.697407955	0.000342875	-0.000051935		
4D3/2			1.786092205	0.000255495	-0.000023782		
4D5/2			1.763884930	0.000227158	-0.000025658		
4F5/2			1.680360115	0.000161368	-0.000015485		
4F7/2			1.665200771	0.000148279	-0.000015542		
5S1/2			1.023218347	0.000071965	-0.000030651		
5P1/2			0.958602907	0.000053757	-0.000010561		
5P3/2			0.886327015	0.000041347	-0.000006514		
5D3/2			0.605554824	0.000008432	-0.000000912		
6S1/2			0.371186647	0.000006415	-0.000002803		
4P1/2 -- (2)	77.316896	-233.835652	1.974695351	0.00104928		-0.000841042	0.000038383
4P3/2			1.804851126	0.000132640	-0.000001093		
4D3/2			1.668632058	0.000585735	-0.000098160		
4D5/2			1.793773066	0.000139848	-0.000003804		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN	5D4	Z=74 A=184 R=1.28981E-34 A.U.					
4F5/2			1.641944709	0.000257285	-0.000037418		
4F7/2			1.671263186	0.000102573	-0.000004261		
5S1/2			1.037228474	0.000086200	-0.000012477		
5P1/2			0.942648438	0.000078123	-0.000021618		
5P3/2			0.889882392	0.000025236	-0.000001688		
5D3/2			0.603202162	0.000015886	-0.000002294		
6S1/2			0.372264600	0.000007431	-0.000001117		
4P3/2 -- (4)	63.593755	-211.083262	1.774780911	0.000552049		-0.000061153	0.000006443
4D3/2			1.742169328	0.000161298	-0.000006630		
4D5/2			1.651270598	0.000349077	-0.000036447		
4F5/2			1.629479101	0.000117275	-0.000006877		
4F7/2			1.594408693	0.000180202	-0.000019788		
5S1/2			1.026230322	0.000119342	-0.000017465		
5P1/2			0.952631318	0.000032752	-0.000002810		
5P3/2			0.874785265	0.000055186	-0.000009216		
5D3/2			0.603127566	0.000006273	-0.000000448		
6S1/2			0.371348300	0.000010034	-0.000001512		
4D3/2 -- (4)	55.684886	-195.251854	1.722496002	0.000686941		-0.000000717	0.000000098
4D5/2			1.721275685	0.000128675	-0.000000009		
4F5/2			1.530434490	0.000356727	-0.000051730		
4F7/2			1.603302918	0.000085607	-0.000000931		
5S1/2			1.024481317	0.000041528	-0.000001356		
5P1/2			0.942061530	0.000082098	-0.000008467		
5P3/2			0.880433288	0.000022154	-0.000000884		
5D3/2			0.597161172	0.000024125	-0.000002354		
6S1/2			0.371216673	0.000003542	-0.000000141		
4D5/2 -- (6)	52.748602	-189.806440	1.691187736	0.000577741		-0.000000139	0.000000028
4F5/2			1.596118824	0.000094584	-0.000002996		
4F7/2			1.526606739	0.000283179	-0.000034323		
5S1/2			1.020426653	0.0000849615	-0.000001320		
5P1/2			0.946668899	0.000025910	-0.000000492		
5P3/2			0.874816960	0.000049924	-0.000003613		
5D3/2			0.601407743	0.000006412	-0.000000132		
6S1/2			0.370889780	0.000004125	-0.000000139		
4F5/2 -- (6)	37.126669	-155.351946	1.487254189	0.000481301		-0.000000000	0.000000000
4F7/2			1.499867229	0.000074541	-0.000000000		
5S1/2			0.990449085	0.000023191	-0.000000091		
5P1/2			0.913909679	0.000028419	-0.000000035		
5P3/2			0.857555358	0.000013422	-0.000000001		
5D3/2			0.589623117	0.000013341	-0.000000211		
6S1/2			0.368667971	0.000001983	-0.000000002		
4F7/2 -- (8)	36.120827	-153.036495	1.471267443	0.000440232		-0.000000000	0.000000000
5S1/2			0.986939407	0.000029860	-0.000000105		
5P1/2			0.919213787	0.000018712	-0.000000006		
5P3/2			0.851958809	0.000024070	-0.000000006		
5D3/2			0.593035131	0.000005214	-0.000000004		
6S1/2			0.368396470	0.000002403	-0.000000002		
5S1/2 -- (2)	17.816962	-93.593769	0.841359422	0.000035833		-0.001473894	0.000045593

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
TUNGSTEN 5D4 Z=74 A=184 R=1.28981E-04 A.U.							
5P1/2			0.707871267	0.000030928	-0.000003771		
5P3/2			0.677448764	0.000026679	-0.000006658		
5D3/2			0.540202571	0.000013261	-0.000001795		
6S1/2			0.350652742	0.000002204	-0.000000978		
5P1/2 -- (2)	14.496422	-83.860200	0.763894140	0.000051376		-0.000125925	0.000035744
5P3/2			0.691317385	0.000006394	-0.000000060		
5D3/2			0.501431759	0.000032580	-0.000007529		
6S1/2			0.350739828	0.000003920	-0.000000576		
5P3/2 -- (4)	11.518224	-75.704945	0.675566742	0.000025966		-0.000008728	0.000000919
5D3/2			0.517474495	0.000008229	-0.000000733		
6S1/2			0.346826877	0.000004945	-0.000000728		
5D3/2 -- (4)	4.728630	-48.076551	0.430185413	0.000019303		-0.000000043	0.000000006
6S1/2			0.315712072	0.000000872	-0.000000001		
6S1/2 -- (2)	1.889624	-29.029777	0.277814475	0.000001077		-0.000131238	0.000004059
ETOT	-16141.50631	18184.74048	-40346.76349	6005.86914	19.232952225	-2.039479198	0.086867383
RHENIUM 5D5 Z=75 A=187 R=1.29678E-04 A.U.							
1S1/2 -- (2)	3586.331668	-6647.016091	52.687461071	6.064120041		-1.175908648	0.039799696
2S1/2			16.309312072	0.319617242	-0.038009981		
2P1/2			19.787588761	0.663111595	-0.091173362		
2P3/2			17.113697263	0.308382392	-0.089163726		
3S1/2			6.787341410	0.068495310	-0.008714780		
3P1/2			7.452687997	0.131288823	-0.017941147		
3P3/2			6.723263799	0.065035151	-0.019387547		
3D3/2			6.822402327	0.002949658	-0.000356152		
3D5/2			6.607459323	0.001180212	-0.000378716		
4S1/2			3.059156634	0.016893110	-0.002180055		
4P1/2			3.138709344	0.030462678	-0.004157678		
4P3/2			2.861875217	0.014963331	-0.004489811		
4D3/2			2.697415271	0.000714776	-0.000086669		
4D5/2			2.620834499	0.000283834	-0.000091879		
4F5/2			2.179025414	0.000001470	-0.000000163		
4F7/2			2.147248737	0.000000554	-0.000000183		
5S1/2			1.255813428	0.003078255	-0.000398487		
5P1/2			1.162577103	0.004694568	-0.000640575		
5P3/2			1.053660678	0.002205290	-0.000662557		
5D3/2			0.698342006	0.000048371	-0.000005869		
5D5/2			0.665247781	0.000018116	-0.000005872		
6S1/2			0.402052957	0.000276540	-0.000035816		
2S1/2 -- (2)	842.688702	-1620.999616	11.986509568	0.117818551		-0.161544473	0.005184069
2P1/2			11.858180018	0.036016522	-0.000067513		
2P3/2			11.160995906	0.055116665	-0.001057276		
3S1/2			5.673412120	0.013791615	-0.003365952		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM	505	Z=75 A=187 R=1.29678E-04 A.U.					
3P1/2			6.176586902	0.022941599	-0.003591139		
3P3/2			5.779268074	0.017209026	-0.002126171		
3D3/2			6.390641090	0.014615885	-0.002016973		
3D5/2			6.230785406	0.006406341	-0.001991207		
4S1/2			2.796343528	0.003372903	-0.000865544		
4P1/2			2.847866888	0.005520376	-0.000889865		
4P3/2			2.650542786	0.004046666	-0.000553987		
4D3/2			2.608789781	0.002599335	-0.000378695		
4D5/2			2.544260763	0.001189362	-0.000376743		
4F5/2			2.176902157	0.000124043	-0.000016383		
4F7/2			2.145320961	0.000044769	-0.000015867		
5S1/2			1.208326810	0.000613325	-0.000158785		
5P1/2			1.117896997	0.000855499	-0.000138590		
5P3/2			1.022665462	0.000598021	-0.000083308		
5D3/2			0.692481201	0.000168245	-0.000024710		
5D5/2			0.669472066	0.000073293	-0.000023245		
6S1/2			0.397792253	0.000055081	-0.000014279		
2P1/2 -- (2)	841.629472	-1619.514822	14.641636705	0.268109273		-0.015528837	0.000738031
2P3/2			13.079517168	0.036669739	-0.000058693		
3S1/2			6.009784961	0.009397299	-0.000676309		
3P1/2			6.168401834	0.021590849	-0.003252882		
3P3/2			6.013646452	0.008402578	-0.000228823		
3D3/2			6.391262056	0.043673426	-0.010399624		
3D5/2			6.406349231	0.001375068	-0.000312127		
4S1/2			2.870890600	0.002285237	-0.000182844		
4P1/2			2.853602996	0.004838073	-0.000797716		
4P3/2			2.701965112	0.001926697	-0.000061797		
4D3/2			2.611058452	0.008241857	-0.002019632		
4D5/2			2.578215335	0.000303017	-0.000064634		
4F5/2			2.177318616	0.000147778	-0.000031012		
4F7/2			2.146344348	0.000008262	-0.000003127		
5S1/2			1.221628409	0.000415049	-0.000033905		
5P1/2			1.118980792	0.000740559	-0.000124050		
5P3/2			1.030180341	0.000283677	-0.000009362		
5D3/2			0.692650978	0.000538268	-0.000132444		
5D5/2			0.662574694	0.000019134	-0.000004042		
6S1/2			0.398983490	0.000037268	-0.000003054		
2P3/2 -- (4)	640.077688	-1352.737126	12.505183261	0.133754879		-0.001073233	0.000118149
3S1/2			5.892758441	0.011868208	-0.000858767		
3P1/2			6.295105297	0.007332083	-0.000328347		
3P3/2			5.769527793	0.015797597	-0.001450155		
3D3/2			6.487166468	0.012956119	-0.001281258		
3D5/2			6.207953915	0.021662696	-0.006154342		
4S1/2			2.842959185	0.002764231	-0.000216953		
4P1/2			2.873881575	0.001660066	-0.000085931		
4P3/2			2.651379881	0.003459391	-0.000351137		
4D3/2			2.627690986	0.002410657	-0.000240776		
4D5/2			2.541970316	0.003929430	-0.001151336		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM 5D5 Z=75 A=187 R=1.29678E-04 A.U.							
4F5/2			2.177318881	0.000092987	-0.000009140		
4F7/2			2.145215116	0.000080635	-0.000026002		
5S1/2			1.216570217	0.000497802	-0.000039741		
5P1/2			1.121864147	0.000254674	-0.000013537		
5P3/2			1.022863208	0.000505090	-0.000052158		
5D3/2			0.693721659	0.000157200	-0.000015728		
5D5/2			0.660347165	0.000241251	-0.000070973		
6S1/2			0.398529495	0.000044642	-0.000003573		
3S1/2 -- (2)	265.752633	-594.964144	4.558190507	0.007274698		-0.036151737	0.001151217
3P1/2			4.183033328	0.002543076	-0.000043484		
3P3/2			4.012893214	0.003772355	-0.000247518		
3D3/2			4.578934706	0.002334868	-0.000070981		
3D5/2			4.525807779	0.003123336	-0.000083977		
4S1/2			2.460386342	0.001134003	-0.000404620		
4P1/2			2.510742255	0.001467854	-0.000257132		
4P3/2			2.356397907	0.001144959	-0.000138883		
4D3/2			2.336158798	0.000619567	-0.000060266		
4D5/2			2.290127853	0.000604659	-0.000053029		
4F5/2			2.108697612	0.000451428	-0.000063111		
4F7/2			2.081141971	0.000204400	-0.000061427		
5S1/2			1.150523140	0.000205366	-0.000075732		
5P1/2			1.067367216	0.000236033	-0.000042554		
5P3/2			0.980534305	0.000175167	-0.000022659		
5D3/2			0.674928343	0.000042744	-0.000004436		
5D5/2			0.645028911	0.000037173	-0.000003701		
6S1/2			0.392638996	0.000018427	-0.000006822		
3P1/2 -- (2)	261.758225	-589.056422	4.816915308	0.014373926		-0.003878829	0.000182022
3P3/2			4.397694270	0.001894521	-0.000009194		
3D3/2			4.472758480	0.005168458	-0.000336060		
3D5/2			4.739629881	0.002342155	-0.000014464		
4S1/2			2.535506801	0.000985367	-0.000120798		
4P1/2			2.469801198	0.001573555	-0.000363928		
4P3/2			2.390336535	0.000553559	-0.000029153		
4D3/2			2.348098276	0.001468007	-0.000222906		
4D5/2			2.312942118	0.000400408	-0.000014206		
4F5/2			2.102047534	0.000767497	-0.000168456		
4F7/2			2.095198238	0.000084171	-0.000017790		
5S1/2			1.162310756	0.000173999	-0.000022779		
5P1/2			1.062582165	0.000237666	-0.000057901		
5P3/2			0.985151532	0.000082235	-0.000004828		
5D3/2			0.675749495	0.000102306	-0.000016464		
5D5/2			0.646407522	0.000024108	-0.000000986		
6S1/2			0.393676534	0.000015559	-0.000002055		
3P3/2 -- (4)	212.559495	-519.860015	4.306055611	0.007598478		-0.000278935	0.000030316
3D3/2			4.567683799	0.001716689	-0.000013637		
3D5/2			4.371548934	0.004220311	-0.000089656		
4S1/2			2.502578842	0.001371596	-0.000166568		
4P1/2			2.511509439	0.000606080	-0.000043933		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM 5D5 Z=75 A=167 R=1.29678E-04 A.U.							
4P3/2			2.326997560	0.001163999	-0.000165095		
4D3/2			2.329366999	0.000520888	-0.000048236		
4D5/2			2.277395283	0.001174780	-0.000173626		
4F5/2			2.105689320	0.000393525	-0.000039668		
4F7/2			2.066266402	0.000374700	-0.000111747		
5S1/2			1.156637422	0.000233703	-0.000029694		
5P1/2			1.067332260	0.000091814	-0.000007369		
5P3/2			0.976753434	0.000167467	-0.000025239		
5D3/2			0.674505636	0.000035479	-0.000003439		
5D5/2			0.644278731	0.000073864	-0.000011737		
6S1/2			0.393170470	0.000020802	-0.000002660		
3D3/2 -- (4)	207.237040	-512.165849	4.960360030	0.012783802		-0.000003238	0.000000454
3D5/2			4.953209918	0.002373013	-0.000000091		
4S1/2			2.571114692	0.000550040	-0.000013615		
4P1/2			2.550688347	0.001061266	-0.000072524		
4P3/2			2.412166399	0.000394553	-0.000009911		
4D3/2			2.341001480	0.001285035	-0.000119842		
4D5/2			2.340726109	0.000423108	-0.000005929		
4F5/2			2.094718715	0.001718145	-0.000424453		
4F7/2			2.103888504	0.000056057	-0.000006806		
5S1/2			1.168207661	0.000096960	-0.000003037		
5P1/2			1.073441183	0.000152625	-0.000011102		
5P3/2			0.988191808	0.000057108	-0.000001675		
5D3/2			0.675530914	0.000080997	-0.000008129		
5D5/2			0.648077531	0.000025771	-0.000000415		
6S1/2			0.394199146	0.000008670	-0.000000280		
3D5/2 -- (6)	196.455330	-495.938350	4.855343791	0.010821224		-0.000000626	0.000000131
4S1/2			2.560449276	0.000650792	-0.000013672		
4P1/2			2.560458612	0.000456594	-0.000006699		
4P3/2			2.393291847	0.000780224	-0.000032748		
4D3/2			2.378880284	0.000346863	-0.000006419		
4D5/2			2.300683316	0.001158456	-0.000077002		
4F5/2			2.127401927	0.000357775	-0.000026712		
4F7/2			2.073323637	0.001069523	-0.000297122		
5S1/2			1.166349746	0.000112369	-0.000003042		
5P1/2			1.074476782	0.000067674	-0.000001301		
5P3/2			0.985654380	0.000108922	-0.000005035		
5D3/2			0.677656279	0.000022210	-0.000000475		
5D5/2			0.645837497	0.000068774	-0.000004934		
6S1/2			0.394033200	0.000010020	-0.000000281		
4S1/2 -- (2)	85.348291	-250.674167	2.035137271	0.000618625		-0.000007744	0.000286325
4P1/2			1.797677126	0.000295582	-0.000018170		
4P3/2			1.731371046	0.000365207	-0.000056023		
4D3/2			1.824733064	0.000271686	-0.000025213		
4D5/2			1.801651988	0.000241951	-0.000027284		
4F5/2			1.736372863	0.000175063	-0.000016630		
4F7/2			1.721464069	0.000162590	-0.000016726		
5S1/2			1.052695392	0.000078934	-0.000033691		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RHENIUM 5D5 Z=75 A=187 R=1.29678E-04 A.U.							
5P1/2			0.990895146	0.000060409	-0.000011875		
5P3/2			0.915463489	0.000045558	-0.000007257		
5D3/2			0.647253093	0.000010162	-0.000001103		
5D5/2			0.619908108	0.000013402	-0.000001081		
6S1/2			0.384234642	0.000007100	-0.000003110		
4P1/2 -- (2)	80.937578	-242.569090	2.017081463	0.001115476		-0.000946013	0.000044265
4P3/2			1.841854028	0.000139654	-0.000001238		
4D3/2			1.705602846	0.000624815	-0.000104703		
4D5/2			1.833084261	0.000148995	-0.000004075		
4F5/2			1.697154908	0.000279335	-0.000040197		
4F7/2			1.728509994	0.000112944	-0.000004597		
5S1/2			1.067494564	0.000094068	-0.000013641		
5P1/2			0.974169360	0.000086807	-0.000024134		
5P3/2			0.919333899	0.000027749	-0.000001883		
5D3/2			0.644613895	0.000019198	-0.000002782		
5D5/2			0.620535879	0.000009821	-0.000000325		
6S1/2			0.385379793	0.000008178	-0.000001233		
4P3/2 -- (4)	66.146994	-218.287496	1.809571341	0.000585802		-0.000067165	0.000007278
4D3/2			1.779123670	0.000170596	-0.000006892		
4D5/2			1.686009772	0.000370632	-0.000038162		
4F5/2			1.682293900	0.000126639	-0.000007287		
4F7/2			1.646733277	0.000196436	-0.000020999		
5S1/2			1.055688989	0.000131190	-0.000019272		
5P1/2			0.984414192	0.000036484	-0.000003154		
5P3/2			0.903197045	0.000061065	-0.000010270		
5D3/2			0.644398899	0.000007634	-0.000000556		
5D5/2			0.616127271	0.000018335	-0.000001424		
6S1/2			0.384388448	0.000011106	-0.000001681		
4D3/2 -- (4)	58.234142	-202.425116	1.761723102	0.000734579		-0.000000821	0.000000115
4D5/2			1.760090569	0.000137388	-0.000000011		
4F5/2			1.581928621	0.000384773	-0.000054717		
4F7/2			1.658106371	0.000094346	-0.000000993		
5S1/2			1.054447923	0.000045503	-0.000001509		
5P1/2			0.973765850	0.000091151	-0.000009463		
5P3/2			0.909509789	0.000024499	-0.000000984		
5D3/2			0.637710584	0.000029189	-0.000002902		
5D5/2			0.616754236	0.000008617	-0.000000137		
6S1/2			0.384296403	0.000003913	-0.000000158		
4D5/2 -- (6)	55.102471	-196.654389	1.728971302	0.000617061		-0.000000158	0.000000033
4F5/2			1.649396529	0.000102404	-0.000003155		
4F7/2			1.578153769	0.000307082	-0.000036200		
5S1/2			1.050146012	0.000054258	-0.000001470		
5P1/2			0.978487935	0.000028698	-0.000000554		
5P3/2			0.903568929	0.000055136	-0.000004009		
5D3/2			0.642527766	0.000007758	-0.000000164		
5D5/2			0.612095661	0.000024828	-0.000001745		
6S1/2			0.383946429	0.000004547	-0.000000156		
4F5/2 -- (6)	39.792148	-163.427133	1.551997198	0.000539101		-0.000000000	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)			
RHENIUM 505 Z=75 A=187 R=1.29678E-04 A.U.										
			4F7/2	1.565817865	0.000083851	-0.000000000				
			5S1/2	1.024269085	0.000025694	-0.000000072				
			5P1/2	0.948819931	0.000031853	-0.000000016				
			5P3/2	0.888988924	0.000015072	-0.000000000				
			5D3/2	0.630932340	0.000016375	-0.000000308				
			5D5/2	0.609179375	0.000005088	-0.000000020				
			6S1/2	0.382019071	0.000002220	-0.000000002				
4F7/2 -- (8)	38.733093	-161.043853	1.536309130	0.000493745		-0.000000000	0.000000000			
			5S1/2	1.020890225	0.000033021	-0.000000084				
			5P1/2	0.954098513	0.000020922	-0.000000003				
			5P3/2	0.883550001	0.000026861	-0.000000001				
			5D3/2	0.634451056	0.000006336	-0.000000007				
			5D5/2	0.605623193	0.000014166	-0.000000195				
			6S1/2	0.381755401	0.000002683	-0.000000002				
5S1/2 -- (2)	19.140805	-98.057953	0.866920492	0.000039523		-0.001645167	0.000052273			
			5P1/2	0.731279279	0.000033634	-0.000004056				
			5P3/2	0.699592848	0.000029665	-0.000007398				
			5D3/2	0.573626103	0.000015695	-0.000002121				
			5D5/2	0.554102511	0.000007300	-0.000001994				
			6S1/2	0.363040641	0.000002473	-0.000001106				
5P1/2 -- (2)	15.742999	-88.303432	0.791046964	0.000057490		-0.000147284	0.000006887			
			5P3/2	0.715462910	0.000007046	-0.000000073				
			5D3/2	0.531797881	0.000038453	-0.000008870				
			5D5/2	0.548706207	0.000002510	-0.000000291				
			6S1/2	0.363308682	0.000004370	-0.000000645				
5P3/2 -- (4)	12.469019	-79.563624	0.698799999	0.000028946		-0.000009989	0.000001082			
			5D3/2	0.549033513	0.000009605	-0.000000846				
			5D5/2	0.513378704	0.000016027	-0.000003962				
			6S1/2	0.359228348	0.000005579	-0.000000827				
5D3/2 -- (4)	5.522231	-52.383715	0.462890100	0.000012785		-0.000000056	0.000000008			
			5D5/2	0.456479116	0.000002263	-0.000000000				
			6S1/2	0.330788854	0.000001023	-0.000000000				
5D5/2 -- (1)	4.975838	-49.899449	0.000000000	0.000000000		-0.000000010	0.000000002			
			6S1/2	0.326038031	0.000001558	-0.000000001				
6S1/2 -- (2)	2.046601	-30.501844	0.287614711	0.000001199		-0.000147848	0.000004697			
ETOT	-16692.28339	18874.68066	-41787.37643	6205.10549	20.166130563	-2.139214592	-2.815551619	0.095529560		
OSMIUM 506 Z=76 A=190 R=1.30368E-04 A.U.										
			1S1/2 -- (2)	3713.498503	-6864.516655	53.610021281	6.331558916		-1.254518571	0.043633497
			2S1/2			16.613300506	0.334863182		-0.039899409	
			2P1/2			20.183025083	0.694636636		-0.095049247	
			2P3/2			17.374857771	0.321419353		-0.092930259	
			3S1/2			6.918812629	0.071956843		-0.009172587	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
			7.605585388	0.137841987	-0.018734742		
			6.838798305	0.068134475	-0.020311168		
			6.942532581	0.003092102	-0.000371932		
			6.717612837	0.001235815	-0.000396520		
			3.123915513	0.017836398	-0.002306252		
			3.210021925	0.032176737	-0.004367238		
			2.919392899	0.015782848	-0.004735789		
			2.758561120	0.000758416	-0.000091610		
			2.678540215	0.000300935	-0.000097411		
			2.256637389	0.000001631	-0.000000180		
			2.224140239	0.000000016	-0.000000203		
			1.295579898	0.003338093	-0.000432980		
			1.205692697	0.005140616	-0.000697521		
			1.090740749	0.002414922	-0.000725569		
			0.743911250	0.000056933	-0.000006882		
			0.709171800	0.000021372	-0.000006927		
			0.415136179	0.000300323	-0.000038974		
2S1/2 -- (2)	875.505178	-1677.384308	12.202693708	0.124000795		-0.173699288	0.005723036
			12.079722642	0.037902070	-0.000069105		
			11.346265862	0.057639677	-0.001152317		
			5.777978055	0.014553599	-0.003549877		
			6.295114143	0.024267140	-0.003795277		
			5.878116416	0.017978734	-0.002210958		
			6.503192808	0.015354623	-0.002117813		
			6.335848807	0.006719847	-0.002090387		
			2.853346436	0.003577120	-0.000917556		
			2.909419430	0.005874389	-0.000946049		
			2.792885742	0.004259171	-0.000581020		
			2.667308622	0.002760582	-0.000402063		
			2.599996587	0.001262078	-0.000400212		
			2.234366752	0.000136944	-0.000018080		
			2.222081566	0.000049428	-0.000017524		
			1.245370985	0.000668042	-0.000172896		
			1.157817224	0.000943807	-0.000152762		
			1.057776348	0.000653566	-0.000090763		
			0.737221610	0.000197934	-0.000029069		
			0.703724903	0.000086445	-0.000027448		
			0.410624798	0.000060082	-0.000015571		
2P1/2 -- (2)	874.368162	-1675.837650	14.921563827	0.282295478		-0.017267577	0.000841298
			13.299920397	0.038228175	-0.000065136		
			6.123243239	0.009914887	-0.000711893		
			6.287315962	0.022810377	-0.003433709		
			6.118049550	0.008808077	-0.000239486		
			6.504677350	0.045845171	-0.010916757		
			6.514346150	0.001437047	-0.000327193		
			2.930262996	0.002423566	-0.000193541		
			2.915493889	0.005142782	-0.000847469		
			2.755872580	0.002033815	-0.000065160		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
4D3/2			2.669815195	0.008750721	-0.002144567		
4D5/2			2.634936268	0.000320510	-0.000068575		
4F5/2			2.254817300	0.000162853	-0.000034178		
4F7/2			2.223177239	0.000009102	-0.000003446		
5S1/2			1.259464313	0.000452079	-0.000036870		
5P1/2			1.159004715	0.000816020	-0.000136646		
5P3/2			1.065814418	0.000310894	-0.000010253		
5D3/2			0.737428459	0.000633283	-0.000155860		
5D5/2			0.706130256	0.000022512	-0.000004769		
6S1/2			0.411888646	0.000040652	-0.000003326		
2P3/2 -- (4)	659.230240	-1391.486979	12.692900386	0.139589779		-0.001162811	0.000131661
3S1/2			5.999541005	0.012498491	-0.000911006		
3P1/2			6.412394693	0.007716597	-0.000346991		
3P3/2			5.865110134	0.016551506	-0.001521688		
3D3/2			6.599236491	0.013605671	-0.001343481		
3D5/2			6.310193131	0.022725466	-0.006456670		
4S1/2			2.900586887	0.002923266	-0.000230912		
4P1/2			2.935299350	0.001757214	-0.000091325		
4P3/2			2.703065814	0.003647300	-0.000370881		
4D3/2			2.686344342	0.002556602	-0.000254954		
4D5/2			2.597203692	0.004165276	-0.001220780		
4F5/2			2.254793259	0.000103261	-0.000010143		
4F7/2			2.221946169	0.000089545	-0.000028885		
5S1/2			1.253944937	0.000540536	-0.000043432		
5P1/2			1.161907372	0.000279438	-0.000014918		
5P3/2			1.057885164	0.000552739	-0.000057199		
5D3/2			0.738606207	0.000184695	-0.000018451		
5D5/2			0.703552864	0.000284171	-0.000083634		
6S1/2			0.411392548	0.000048541	-0.000003911		
3S1/2 -- (2)	276.560553	-615.720919	4.641936747	0.007688644		-0.039010176	0.001275259
3P1/2			4.261849814	0.002682100	-0.000044732		
3P3/2			4.083276835	0.003968350	-0.000267637		
3D3/2			4.661494728	0.002460258	-0.000075056		
3D5/2			4.605804088	0.003286505	-0.000089193		
4S1/2			2.509229813	0.001204662	-0.000429647		
4P1/2			2.563197183	0.001569395	-0.000274744		
4P3/2			2.401808085	0.001202661	-0.000145991		
4D3/2			2.387090354	0.000659829	-0.000064225		
4D5/2			2.339216261	0.000643131	-0.000056353		
4F5/2			2.181931548	0.000495355	-0.000069281		
4F7/2			2.153948220	0.000224678	-0.000067489		
5S1/2			1.184586609	0.000224043	-0.000082601		
5P1/2			1.104032358	0.000261646	-0.000047151		
5P3/2			1.013021128	0.000191190	-0.000024763		
5D3/2			0.717237480	0.000050508	-0.000005253		
5D5/2			0.686117492	0.000043941	-0.000004386		
6S1/2			0.405199247	0.000020131	-0.000007452		
3P1/2 -- (2)	272.480428	-609.726453	4.908946865	0.015233842		-0.004331022	0.000208273

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
			4.476140915	0.001978870	-0.000010290		
			4.554701514	0.005454475	-0.000358406		
			4.824897868	0.002464092	-0.000015491		
			2.586501805	0.001044421	-0.000127924		
			2.521441569	0.001675498	-0.000387497		
			2.436864149	0.000582803	-0.000030844		
			2.399630802	0.001559132	-0.000236602		
			2.362889976	0.000426390	-0.000015108		
			2.175052259	0.000842314	-0.000184963		
			2.168967944	0.00092599	-0.000019552		
			1.197029295	0.000189410	-0.000024793		
			1.099000153	0.000262291	-0.000063929		
			1.017968302	0.000089933	-0.000005311		
			0.718193301	0.000120613	-0.000019428		
			0.687706525	0.000028518	-0.000001169		
			0.406295328	0.000016959	-0.000002240		
3P3/2 -- (4)	219.824297	-535.858878	4.377859309	0.007981766		-0.000303897	0.000033958
			4.645692431	0.001801798	-0.000013967		
			4.444996782	0.004430256	-0.000093073		
			2.551713931	0.001459093	-0.000178037		
			2.563137023	0.000644904	-0.000046939		
			2.371146443	0.001231244	-0.000174927		
			2.379429537	0.000557087	-0.000051692		
			2.325484032	0.001251751	-0.000185728		
			2.178378682	0.000431634	-0.000043507		
			2.137807063	0.000411611	-0.000122666		
			1.190876763	0.000254959	-0.000032551		
			1.103865334	0.000101207	-0.000008162		
			1.008924716	0.000183835	-0.000027770		
			0.716708718	0.000042068	-0.000004089		
			0.685218020	0.000087488	-0.000013977		
			0.405745859	0.000022718	-0.000002919		
3D3/2 -- (4)	214.463338	-528.136403	5.047763053	0.013448617		-0.000003655	0.000000527
			5.038646683	0.002493054	-0.000000102		
			2.622280019	0.000582569	-0.000014473		
			2.603777560	0.001127643	-0.000077466		
			2.458629334	0.000417170	-0.000010495		
			2.391857119	0.001365901	-0.000127880		
			2.390952055	0.000449625	-0.000006324		
			2.167069063	0.001887308	-0.000466355		
			2.178629158	0.000061836	-0.000007488		
			1.203102056	0.000105428	-0.000003321		
			1.110430308	0.000167910	-0.000012285		
			1.021109896	0.000062678	-0.000001845		
			0.717916786	0.000095298	-0.000009617		
			0.689579723	0.000030428	-0.000000493		
			0.406833956	0.000009439	-0.000000307		
3D5/2 -- (6)	203.007451	-510.928851	4.937288076	0.011365679		-0.000000702	0.000000151

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	506	2=76	A=190	R=1.30368E-04	A.U.		
4S1/2			2.611038698	0.000688646	-0.000014534		
4P1/2			2.613428050	0.000484023	-0.000007134		
4P3/2			2.439053695	0.000824085	-0.000034648		
4D3/2			2.430446666	0.000368489	-0.000006856		
4D5/2			2.349573204	0.001229387	-0.000082071		
4F5/2			2.201614784	0.000393250	-0.000029336		
4F7/2			2.145473697	0.001175608	-0.000326626		
5S1/2			1.201091526	0.000122031	-0.000003326		
5P1/2			1.111467932	0.000074323	-0.000001441		
5P3/2			1.018378171	0.000119349	-0.000005536		
5D3/2			0.720303012	0.000026129	-0.000000563		
5D5/2			0.687012476	0.000081028	-0.000005849		
6S1/2			0.406654151	0.000010895	-0.000000307		
4S1/2 -- (2)	89.199459	-259.754728	2.076200328	0.000658496		-0.009771345	0.000318841
4P1/2			1.835065225	0.000312426	-0.000018884		
4P3/2			1.765730137	0.000388906	-0.000060436		
4D3/2			1.863818005	0.000288779	-0.000026724		
4D5/2			1.839839490	0.000257535	-0.000029007		
4F5/2			1.790910615	0.000189220	-0.000017796		
4F7/2			1.776089403	0.000177504	-0.000017930		
5S1/2			1.082360431	0.000086417	-0.000036964		
5P1/2			1.023173613	0.000067660	-0.000013307		
5P3/2			0.944334059	0.000049985	-0.000008054		
5D3/2			0.685930851	0.000011983	-0.000001306		
5D5/2			0.657634371	0.000015892	-0.000001281		
6S1/2			0.396413888	0.000007783	-0.0000003417		
4P1/2 -- (2)	84.706479	-251.558611	2.060037850	0.001190238		-0.001063339	0.000050981
4P3/2			1.879292749	0.000146944	-0.000001401		
4D3/2			1.743020222	0.000666259	-0.000111670		
4D5/2			1.872848908	0.000158615	-0.000004365		
4F5/2			1.751019473	0.000302182	-0.000043032		
4F7/2			1.784165083	0.000123796	-0.000004941		
5S1/2			1.097965953	0.000102474	-0.000014888		
5P1/2			1.005687261	0.000096149	-0.000026854		
5P3/2			0.948529291	0.000030386	-0.000002092		
5D3/2			0.683033323	0.000022695	-0.000003301		
5D5/2			0.658377965	0.000011648	-0.000000390		
6S1/2			0.397619505	0.000008915	-0.000001348		
4P3/2 -- (4)	68.846190	-225.662613	1.844715078	0.000621314		-0.000073696	0.000008210
4D3/2			1.816456941	0.000180332	-0.000007157		
4D5/2			1.721098872	0.000393289	-0.000039935		
4F5/2			1.733629667	0.000136255	-0.000007691		
4F7/2			1.697474526	0.000213242	-0.000022193		
5S1/2			1.085317387	0.000143981	-0.000021232		
5P1/2			1.016160260	0.000040517	-0.000003528		
5P3/2			0.931340148	0.000067309	-0.000011400		
5D3/2			0.682647708	0.000009090	-0.000000675		
5D5/2			0.653330829	0.000021903	-0.000001723		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76 A=190 R=1.30368E-04 A.U.					
4D3/2 -- (4)	60.872071	-209.775634	0.396557056 1.801376597 1.799312823 1.632269713 1.711443541 1.084616084 1.005470912 0.938340668 0.675310117 0.654147864 0.396508179	0.000012180 0.000784951 0.000146582 0.000413626 0.000103498 0.000049764 0.000100893 0.000026984 0.000034536 0.000010230 0.000004280	-0.000031852 -0.000000012 -0.000057676 -0.000001055 -0.000001675 -0.000010543 -0.000001091 -0.000003496 -0.000000166 -0.000000176	-0.000000939	0.000000135
4D5/2 -- (6)	57.534968	-203.664814	1.767139976 1.701363430 1.628356721 1.080058522 1.010297593 0.932075042 0.680660280 0.648894398 0.396136890	0.000658583 0.000110476 0.000331755 0.000059226 0.000031685 0.000060659 0.000009179 0.000029411 0.000004964	-0.000003310 -0.000038035 -0.000001633 -0.000000621 -0.000004431 -0.000000199 -0.000002108 -0.000000174	-0.000000179	0.000000039
4F5/2 -- (6)	42.492268	-171.504690	1.614639834 1.629513428 1.057762252 0.983344747 0.919876171 0.669372189 0.646799309 0.394480952	0.000599781 0.000093639 0.000028372 0.000035542 0.000016831 0.000019610 0.000006124 0.000002457	-0.000000000 -0.000000055 -0.000000065 -0.000000001 -0.000000421 -0.000000028 -0.000000003	-0.000000000	0.000000000
4F7/2 -- (8)	41.372911	-169.034874	1.599019957 1.054451518 0.988574417 0.914538374 0.672975615 0.643116926 0.394221620	0.000549812 0.000036371 0.000023274 0.000029813 0.000007527 0.000016929 0.000002962	-0.000000066 -0.000000001 -0.000000001 -0.000000010 -0.000000268 -0.000000003	-0.000000000	0.000000000
5S1/2 -- (2)	20.528237	-102.646933	0.892615041 0.754719628 0.721648672 0.604575623 0.584728467 0.374700965	0.000043495 0.000036484 0.000032888 0.000018219 0.000008577 0.000002745	-0.000004350 -0.000008199 -0.000002456 -0.000002323 -0.000001237	-0.001833069	0.000059788
5P1/2 -- (2)	17.046922	-92.853009	0.818147342 0.739445500 0.560072997 0.579473106 0.375140579	0.000064089 0.000007729 0.000044572 0.000002994 0.000004819	-0.000000088 -0.000010262 -0.000000340 -0.000000715	-0.000171670	0.000008225
5P3/2 -- (4)	13.449469	-83.477788	0.721763292 0.578274999	0.000032120 0.000011008	-0.000000958	-0.000011381	0.000001267

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
OSMIUM	5D6	Z=76	A=190	R=1.30368E-04	A.U.		
5D5/2				0.540906378	0.000018503	-0.000004524	
6S1/2				0.370898925	0.000006226	-0.000000928	
5D3/2 -- (4)	6.324156	-56.546654	0.493012657	0.000015436		-0.000000071	0.000000010
5D5/2			0.486499156	0.000002742	-0.000000000		
6S1/2			0.344523911	0.000001181	-0.000000000		
5D5/2 -- (2)	5.707447	-53.903865	0.472092548	0.000012099		-0.000000013	0.000000003
6S1/2			0.339897213	0.000001790	-0.000000000		
6S1/2 -- (2)	2.198333	-31.926710	0.296740347	0.000001320		-0.000164980	0.000005381
ETOT	-17255.07184	19584.82986	-43264.30860	6408.42119	21.133115928	-2.242461265	-3.009893182
0.104953377							
IRIDIUM	5D9	Z=77	A=193	R=1.31050E-04	A.U.		
1S1/2 -- (2)	3844.543150	-7087.616056	54.544232568	6.607782217		-1.337872122	0.047790549
2S1/2			16.921440406	0.350678840	-0.041864303		
2P1/2			20.585161554	0.727319409	-0.099030872		
2P3/2			17.636973309	0.334808578	-0.096798224		
3S1/2			7.051760369	0.075550305	-0.009648962		
3P1/2			7.760474346	0.144630365	-0.019547922		
3P3/2			6.954744960	0.071332387	-0.021263847		
3D3/2			7.062954851	0.003238110	-0.000387982		
3D5/2			6.827742294	0.001292705	-0.000414735		
4S1/2			3.189642464	0.018823164	-0.002438554		
4P1/2			3.282531863	0.033967937	-0.004584018		
4P3/2			2.977598204	0.016638573	-0.004992576		
4D3/2			2.820420043	0.000803961	-0.000096733		
4D5/2			2.736859878	0.000318774	-0.000103182		
4F5/2			2.332132607	0.000001799	-0.000000198		
4F7/2			2.298668875	0.000000680	-0.000000224		
5S1/2			1.332893943	0.003596798	-0.000467459		
5P1/2			1.243729621	0.005561389	-0.000750279		
5P3/2			1.120047939	0.002596076	-0.000780019		
5D3/2			0.742617522	0.000058278	-0.000007017		
5D5/2			0.698086133	0.000021285	-0.000006899		
2S1/2 -- (2)	909.450882	-1735.380280	12.421484072	0.130456380		-0.186710731	0.006312392
2P1/2			12.304261426	0.039871579	-0.000070711		
2P3/2			11.532896443	0.060248905	-0.001255595		
3S1/2			5.883540338	0.015349667	-0.003741699		
3P1/2			6.414884600	0.025654147	-0.004008512		
3P3/2			5.977390765	0.018767113	-0.002296758		
3D3/2			6.616140258	0.016118220	-0.002221936		
3D5/2			6.441052412	0.007042883	-0.002192755		
4S1/2			2.911103920	0.003792032	-0.000972217		
4P1/2			2.971858055	0.006247860	-0.001005225		
4P3/2			2.755822971	0.004479902	-0.000608878		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77 A=193 R=1.31050E-04 A.U.					
4D3/2			2.726500694	0.002930052	-0.000426598		
4D5/2			2.656331678	0.001338373	-0.000424883		
4F5/2			2.329715755	0.000150435	-0.000019853		
4F7/2			2.296481303	0.000054287	-0.000019253		
5S1/2			1.280121888	0.000723039	-0.000187061		
5P1/2			1.193020368	0.001028764	-0.000166360		
5P3/2			1.085618068	0.000701105	-0.000097046		
5D3/2			0.735972534	0.000202632	-0.000029755		
5D5/2			0.692838728	0.000086110	-0.000027374		
2P1/2 -- (2)	908.242248	-1733.780357	15.205594128	0.297121733		-0.019189359	0.000957889
2P3/2			13.522026953	0.039828062	-0.000072202		
3S1/2			6.237899538	0.010455793	-0.000748895		
3P1/2			6.407490620	0.024086568	-0.003622373		
3P3/2			6.222957684	0.009226481	-0.000250453		
3D3/2			6.618524012	0.048084887	-0.011450024		
3D5/2			6.622431460	0.001500348	-0.000342684		
4S1/2			2.990465646	0.002569211	-0.000204754		
4P1/2			2.978283401	0.005464337	-0.000899844		
4P3/2			2.810419144	0.002145712	-0.000068662		
4D3/2			2.729257004	0.009284650	-0.002275629		
4D5/2			2.692271367	0.000338723	-0.000072703		
4F5/2			2.330200839	0.000178565	-0.000037477		
4F7/2			2.297648588	0.000009974	-0.000003778		
5S1/2			1.294966339	0.000489313	-0.000039837		
5P1/2			1.194305203	0.000888492	-0.000148717		
5P3/2			1.094062404	0.000334477	-0.000011023		
5D3/2			0.736190904	0.000648264	-0.000159579		
5D5/2			0.695163230	0.000022362	-0.000004751		
2P3/2 -- (4)	678.708756	-1430.844136	12.881065794	0.145595595		-0.001258583	0.000146510
3S1/2			6.107189349	0.013155793	-0.000965985		
3P1/2			6.530659112	0.008116705	-0.000366463		
3P3/2			5.960923802	0.017329468	-0.001595572		
3D3/2			6.711535158	0.014276293	-0.001407562		
3D5/2			6.412427880	0.023820999	-0.006768339		
4S1/2			2.958944951	0.003090107	-0.000245671		
4P1/2			2.997541297	0.001859395	-0.000097000		
4P3/2			2.755293357	0.003843393	-0.000391509		
4D3/2			2.745641812	0.002709477	-0.000269768		
4D5/2			2.652997562	0.004412337	-0.001293541		
4F5/2			2.330148577	0.000114116	-0.000011202		
4F7/2			2.296312711	0.000098938	-0.000031926		
5S1/2			1.288980894	0.000583227	-0.000047167		
5P1/2			1.197178798	0.000302943	-0.000016242		
5P3/2			1.085622534	0.000593811	-0.000061574		
5D3/2			0.737315995	0.000188800	-0.000018831		
5D5/2			0.692643371	0.000282697	-0.000083232		
3S1/2 -- (2)	287.721007	-637.019870	4.726420283	0.008121549		-0.042077041	0.001411252
3P1/2			4.341401666	0.002827367	-0.000046003		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77 A=193 R=1.31050E-04 A.U.					
3P3/2			4.154054949	0.004172196	-0.000289384		
3D3/2			4.744515247	0.002590856	-0.000079394		
3D5/2			4.686164513	0.003455679	-0.000094762		
4S1/2			2.558642994	0.001279070	-0.000455972		
4P1/2			2.616310098	0.001676853	-0.000293365		
4P3/2			2.447663273	0.001262154	-0.000153343		
4D3/2			2.438541347	0.000701981	-0.000068364		
4D5/2			2.388784661	0.000683546	-0.000059814		
4F5/2			2.253110147	0.000541175	-0.000075719		
4F7/2			2.224470925	0.000245804	-0.000073806		
5S1/2			1.216581030	0.000242855	-0.000089512		
5P1/2			1.136428393	0.000286520	-0.000051611		
5P3/2			1.038922212	0.000204783	-0.000026557		
5D3/2			0.716165612	0.000051895	-0.000005406		
5D5/2			0.675875356	0.000043865	-0.000004384		
3P1/2 -- (2)	283.552934	-630.936711	5.001849712	0.016072318		-0.004832256	0.000237993
3P3/2			4.555032484	0.002065205	-0.000011501		
3D3/2			4.637078242	0.005755583	-0.000382375		
3D5/2			4.910564753	0.002590313	-0.000016595		
4S1/2			2.638118527	0.001106512	-0.000135403		
4P1/2			2.573723158	0.001783095	-0.000412343		
4P3/2			2.483867153	0.000613144	-0.000032616		
4D3/2			2.451697658	0.001653973	-0.000250794		
4D5/2			2.413338411	0.000453776	-0.000016053		
4F5/2			2.246022711	0.000920363	-0.000202195		
4F7/2			2.240447447	0.000101377	-0.000021389		
5S1/2			1.229636606	0.000204879	-0.000026812		
5P1/2			1.131196344	0.000286901	-0.000069733		
5P3/2			1.044127990	0.000096531	-0.000005734		
5D3/2			0.717133010	0.000123622	-0.000019922		
5D5/2			0.677422627	0.000028497	-0.000001169		
3P3/2 -- (4)	227.229467	-552.126743	4.449822871	0.008378232		-0.000330717	0.000037979
3D3/2			4.723854304	0.001889798	-0.000014302		
3D5/2			4.518516822	0.004647070	-0.000096629		
4S1/2			2.601374611	0.001551585	-0.000190229		
4P1/2			2.615345951	0.000685885	-0.000050122		
4P3/2			2.415679702	0.001301602	-0.000185230		
4D3/2			2.429943462	0.000595251	-0.000055338		
4D5/2			2.373986646	0.001332591	-0.000198459		
4F5/2			2.248958338	0.000471344	-0.000047506		
4F7/2			2.207023065	0.000450055	-0.000134029		
5S1/2			1.223005319	0.000276393	-0.000035458		
5P1/2			1.136111364	0.000110225	-0.000008932		
5P3/2			1.034561242	0.000198099	-0.000029992		
5D3/2			0.715592535	0.000043380	-0.000004226		
5D5/2			0.674964453	0.000087487	-0.000014044		
3D3/2 -- (4)	221.825566	-544.369983	5.135314064	0.014136396		-0.000004119	0.000000611
3D5/2			5.124137660	0.002616924	-0.000000114		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM 5D9 Z=77 A=193 R=1.31050E-04 A.U.							
4S1/2			2.674010087	0.000616681	-0.000015375		
4P1/2			2.657478163	0.001197582	-0.000082716		
4P3/2			2.505517356	0.000440826	-0.000011108		
4D3/2			2.443180066	0.001450783	-0.000136344		
4D5/2			2.441634485	0.000477448	-0.000006739		
4F5/2			2.237341388	0.002063966	-0.000510127		
4F7/2			2.249835567	0.000067884	-0.000008200		
5S1/2			1.235842880	0.000113895	-0.000003608		
5P1/2			1.143081697	0.000182518	-0.000013432		
5P3/2			1.047308845	0.000067527	-0.000001996		
5D3/2			0.716827576	0.000097568	-0.000009896		
5D5/2			0.679195568	0.000030342	-0.000000495		
3D5/2 -- (6)	209.663872	-526.137779	5.019200130	0.011927470		-0.000000785	0.000000174
4S1/2			2.662165997	0.000728290	-0.000015441		
4P1/2			2.666990433	0.000512785	-0.000007593		
4P3/2			2.485214694	0.000869899	-0.000036640		
4D3/2			2.482479382	0.000391166	-0.000007316		
4D5/2			2.398878670	0.001303709	-0.000087402		
4F5/2			2.273714250	0.000430323	-0.000032075		
4F7/2			2.215298303	0.001286213	-0.0000357392		
5S1/2			1.233680801	0.000131668	-0.000003613		
5P1/2			1.144104850	0.000080642	-0.000001576		
5P3/2			1.044420039	0.000128375	-0.000005975		
5D3/2			0.719160974	0.000026747	-0.000000581		
5D5/2			0.676707743	0.000080637	-0.000005854		
4S1/2 -- (2)	93.202267	-269.093653	2.117774697	0.000700632		-0.010596143	0.000354724
4P1/2			1.872937969	0.000330112	-0.000019614		
4P3/2			1.800483419	0.000414049	-0.000065200		
4D3/2			1.903337495	0.000306818	-0.000028322		
4D5/2			1.878440148	0.000273936	-0.000030836		
4F5/2			1.844000054	0.000203835	-0.000018981		
4F7/2			1.829097615	0.000193001	-0.000019156		
5S1/2			1.110392588	0.000094015	-0.000040299		
5P1/2			1.051915357	0.000074856	-0.000014727		
5P3/2			0.967704879	0.000053814	-0.000008773		
5D3/2			0.685318774	0.000012307	-0.000001345		
5D5/2			0.648568054	0.000015911	-0.000001283		
4P1/2 -- (2)	88.627300	-260.808623	2.103561967	0.001269400		-0.001194390	0.000058643
4P3/2			1.917165330	0.000154515	-0.000001584		
4D3/2			1.780875205	0.000710206	-0.000119095		
4D5/2			1.913059881	0.000168716	-0.000004675		
4F5/2			1.803559294	0.000325821	-0.000045926		
4F7/2			1.838244891	0.000135115	-0.000005293		
5S1/2			1.126751667	0.000110946	-0.000016149		
5P1/2			1.033833284	0.000105234	-0.000029520		
5P3/2			0.972172140	0.000032657	-0.000002281		
5D3/2			0.682537856	0.000023356	-0.000003412		
5D5/2			0.649315641	0.000011661	-0.000000395		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM	509	Z=77 A=193 R=1.31050E-04 A.U.					
4P3/2 -- (4)	71.632236	-233.209645	1.880211392	0.000658648		-0.000080783	0.000009247
4D3/2			1.854161386	0.000190520	-0.000007428		
4D5/2			1.756532060	0.000417088	-0.000041769		
4F5/2			1.783521157	0.000146117	-0.000008089		
4F7/2			1.746661083	0.000230598	-0.000023369		
5S1/2			1.113283813	0.000157084	-0.000023252		
5P1/2			1.044414826	0.000044471	-0.000003899		
5P3/2			0.954176707	0.000072845	-0.000012418		
5D3/2			0.682031800	0.000009417	-0.000000710		
5D5/2			0.644420266	0.000022081	-0.000001755		
4D3/2 -- (4)	63.599363	-217.303565	1.841441795	0.000838154		-0.000001072	0.000000159
4D5/2			1.838929764	0.000156272	-0.000000014		
4F5/2			1.681464882	0.000443279	-0.000060605		
4F7/2			1.763322225	0.000113051	-0.000001116		
5S1/2			1.113150897	0.000054084	-0.000001846		
5P1/2			1.033804936	0.000110403	-0.000011611		
5P3/2			0.961779345	0.000029184	-0.000001186		
5D3/2			0.674995245	0.000035583	-0.000003654		
5D5/2			0.645310759	0.000010258	-0.000000170		
4D5/2 -- (6)	60.046804	-210.838014	1.805681642	0.000702389		-0.000000203	0.000000045
4F5/2			1.752037181	0.000118796	-0.000003460		
4F7/2			1.677223968	0.000357175	-0.000039828		
5S1/2			1.108350085	0.000064253	-0.000001802		
5P1/2			1.038690026	0.000034574	-0.000000688		
5P3/2			0.955279771	0.000065549	-0.000004810		
5D3/2			0.680197294	0.000009453	-0.000000208		
5D5/2			0.640281616	0.000029456	-0.000002144		
4F5/2 -- (6)	45.219750	-179.574482	1.675060596	0.000663123		-0.000000000	0.000000000
4F7/2			1.690816764	0.000103865	-0.000000000		
5S1/2			1.089189936	0.000031090	-0.000000041		
5P1/2			1.014238488	0.000039145	-0.000000000		
5P3/2			0.945278589	0.000018426	-0.000000003		
5D3/2			0.670426201	0.000020434	-0.000000480		
5D5/2			0.639192035	0.000006215	-0.000000031		
4F7/2 -- (8)	44.032049	-176.997738	1.659255017	0.000608189		-0.000000000	0.000000000
5S1/2			1.085897105	0.000039740	-0.000000051		
5P1/2			1.019371044	0.000025549	-0.000000000		
5P3/2			0.940044306	0.000032461	-0.000000005		
5D3/2			0.673733755	0.000007793	-0.000000012		
5D5/2			0.635866009	0.000017110	-0.000000297		
5S1/2 -- (2)	21.877745	-107.124479	0.916386868	0.000047423		-0.002029736	0.000067919
5P1/2			0.775653863	0.000039200	-0.000004628		
5P3/2			0.740182478	0.000035910	-0.000008965		
5D3/2			0.605893914	0.000018767	-0.000002522		
5D5/2			0.579252331	0.000008647	-0.000002331		
5P1/2 -- (2)	18.244276	-97.093294	0.841501744	0.000070265		-0.000197663	0.000009698
5P3/2			0.758994712	0.000008289	-0.000000103		
5D3/2			0.562631421	0.000046179	-0.000010611		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
IRIDIUM 5D9 Z=77 A=193 R=1.31050E-04 A.U.							
5D5/2			0.574497850	0.000003016	-0.000000343		
5P3/2 -- (4)	14.248208	-86.859528	0.739430262	0.000034757	-0.000012724	0.000001456	
5D3/2			0.579673781	0.000011282	-0.000000976		
5D5/2			0.536800739	0.000018615	-0.000004531		
5D3/2 -- (4)	6.371358	-57.191079	0.486692205	0.000015344	-0.000000078	0.000000012	
5D5/2			0.475900263	0.000002639	-0.000000000		
5D5/2 -- (5)	5.603096	-53.759304	0.457925528	0.000011541	-0.000000014	0.000000003	
ETOT	-17829.98761	20315.23786	-44789.40544	6627.49730	22.132829624	-2.349188164	0.115187339
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
1S1/2 -- (2)	3979.620728	-7316.503227	55.490466627	6.893008877	-1.426289687	0.052295903	
2S1/2			17.233819182	0.367080641	-0.043906809		
2P1/2			20.994078922	0.761178622	-0.103116801		
2P3/2			17.899947984	0.348545540	-0.100766059		
3S1/2			7.186277800	0.079281160	-0.010144584		
3P1/2			7.917489041	0.151662801	-0.020381314		
3P3/2			7.071154225	0.074631281	-0.022246619		
3D3/2			7.183793983	0.003387812	-0.000404296		
3D5/2			6.937961425	0.001350934	-0.000433366		
4S1/2			3.256289652	0.019854532	-0.002577118		
4P1/2			3.356152909	0.035837005	-0.004807880		
4P3/2			3.036296017	0.017529585	-0.005259945		
4D3/2			2.882690032	0.000851276	-0.000102016		
4D5/2			2.795459147	0.000337288	-0.000109169		
4F5/2			2.406746020	0.000001976	-0.000000217		
4F7/2			2.372283838	0.000000748	-0.000000247		
5S1/2			1.374316347	0.003891933	-0.000506811		
5P1/2			1.289355539	0.006076097	-0.000814879		
5P3/2			1.159800858	0.002841243	-0.000853706		
5D3/2			0.807357962	0.000071149	-0.000008532		
5D5/2			0.765330518	0.000026433	-0.000008568		
6S1/2			0.422263404	0.000312332	-0.000040693		
2S1/2 -- (2)	944.568126	-1795.039928	12.642933847	0.137195764	-0.200644167	0.006956556	
2P1/2			12.531893434	0.041928127	-0.000072353		
2P3/2			11.720866316	0.062945926	-0.001367839		
3S1/2			5.990154845	0.016181448	-0.003941816		
3P1/2			6.535970709	0.027105381	-0.004231215		
3P3/2			6.077124517	0.019574217	-0.002383492		
3D3/2			6.729587849	0.016907858	-0.002329494		
3D5/2			6.546491555	0.007375894	-0.002298459		
4S1/2			2.969569876	0.004018026	-0.001029624		
4P1/2			3.035101516	0.006641318	-0.001067447		
4P3/2			2.809184754	0.004708448	-0.000637466		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
4D3/2			2.786084710	0.003107399	-0.000452246		
4D5/2			2.712952654	0.001418030	-0.000450690		
4F5/2			2.404183038	0.000164598	-0.000021712		
4F7/2			2.369968085	0.000059384	-0.000021067		
5S1/2			1.318592240	0.000785909	-0.000203244		
5P1/2			1.235085677	0.001132510	-0.000182962		
5P3/2			1.123177383	0.000765595	-0.000105611		
5D3/2			0.799482494	0.000247420	-0.000036327		
5D5/2			0.759024951	0.000106960	-0.000034044		
6S1/2			0.417797456	0.000063048	-0.000016328		
2P1/2 -- (2)	943.283537	-1793.383949	15.493745208	0.312608787		-0.021312568	0.001089387
2P3/2			13.745774911	0.041468815	-0.000079941		
3S1/2			6.353817778	0.011021151	-0.000787390		
3P1/2			6.528993502	0.025422187	-0.003819255		
3P3/2			6.328405822	0.009658067	-0.000261736		
3D3/2			6.732901793	0.050395696	-0.012000168		
3D5/2			6.730705455	0.001565043	-0.000358620		
4S1/2			3.051451445	0.002722443	-0.000216503		
4P1/2			3.041889275	0.005803243	-0.000954911		
4P3/2			2.865428698	0.002262265	-0.000072301		
4D3/2			2.789101466	0.009842422	-0.002412537		
4D5/2			2.749897438	0.000357586	-0.000077006		
4F5/2			2.404703288	0.000195009	-0.000040929		
4F7/2			2.371206973	0.000010884	-0.000004125		
5S1/2			1.334301254	0.000531892	-0.000043224		
5P1/2			1.236489024	0.000977098	-0.000163463		
5P3/2			1.132212747	0.000366340	-0.000012064		
5D3/2			0.799756767	0.000791479	-0.000194875		
5D5/2			0.761826918	0.000027698	-0.000005903		
6S1/2			0.419053865	0.000042662	-0.000003479		
2P3/2 -- (4)	698.505953	-1470.801587	13.069603509	0.151771970		-0.001360853	0.000162803
3S1/2			6.215750939	0.013841378	-0.001023900		
3P1/2			6.649954799	0.008533083	-0.000386801		
3P3/2			6.056993486	0.018132030	-0.001671889		
3D3/2			6.824164181	0.014969005	-0.001473586		
3D5/2			6.514746734	0.024950866	-0.007089800		
4S1/2			3.017982242	0.003264986	-0.000261269		
4P1/2			3.060519151	0.001965787	-0.000102962		
4P3/2			2.807889642	0.004047434	-0.000413005		
4D3/2			2.805295346	0.002868897	-0.000285176		
4D5/2			2.709037203	0.004669841	-0.001369398		
4F5/2			2.404618737	0.000125631	-0.000012324		
4F7/2			2.369762399	0.000108892	-0.000035149		
5S1/2			1.327781758	0.000631973	-0.000051443		
5P1/2			1.239346000	0.000331687	-0.000017858		
5P3/2			1.123062633	0.000649447	-0.000067479		
5D3/2			0.801035737	0.000230177	-0.000022922		
5D5/2			0.758753551	0.000350664	-0.000103285		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
3S1/2 -- 6S1/2 (2)	299.252103	-658.883000	0.418531182 4.811684983	0.000050615 0.008574388	-0.000004131 -0.000047297	-0.045369501	0.001560303
3P1/2			4.421732882	0.002979190	-0.0000312895		
3P3/2			4.225256352	0.004384291	-0.000084003		
3D3/2			4.766947454	0.003631133	-0.000100699		
3D5/2			2.608589566	0.001357371	-0.000483641		
4S1/2			2.670017411	0.001790425	-0.000313023		
4P1/2			2.493831522	0.001323279	-0.000160923		
4P3/2			2.490296562	0.000745941	-0.000072674		
4D3/2			2.438591062	0.000725807	-0.000063401		
4D5/2			2.323429861	0.000589213	-0.000082472		
4F5/2			2.294112733	0.000267955	-0.000080433		
4F7/2			1.251860862	0.000264355	-0.000097406		
5S1/2			1.174921668	0.000316838	-0.000057046		
5P1/2			1.073555160	0.000223236	-0.000028990		
5D3/2			0.776059541	0.000063598	-0.000006638		
5D5/2			0.738639506	0.000054598	-0.000005466		
6S1/2			0.412486033	0.000021186	-0.000007839		
3P1/2 -- (2)	294.993712	-652.709034	5.095674872	0.016981392	-0.005387778	0.000271611	
3P3/2			4.634399773	0.002153555	-0.000012838		
3D3/2			4.719955223	0.006070382	-0.0000408035		
3D5/2			4.996691664	0.002721007	-0.000017779		
4S1/2			2.690319855	0.001171745	-0.000143246		
4P1/2			2.626584216	0.001896544	-0.000438501		
4P3/2			2.531210262	0.000644526	-0.000034468		
4D3/2			2.504080804	0.001752297	-0.000265440		
4D5/2			2.464039442	0.000482509	-0.000017037		
4F5/2			2.316150771	0.001002199	-0.000220272		
4F7/2			2.311049127	0.000110572	-0.000023317		
5S1/2			1.265622186	0.000222554	-0.000029118		
5P1/2			1.169425855	0.000314952	-0.000076814		
5P3/2			1.079133513	0.000105466	-0.000006303		
5D3/2			0.777227233	0.000151122	-0.000024368		
5D5/2			0.740518244	0.000035503	-0.000001459		
6S1/2			0.413566523	0.000017772	-0.000002348		
3P3/2 -- (4)	234.779209	-568.668843	4.521965920	0.008788302	-0.000359509	0.000042412	
3D3/2			4.802218538	0.001980770	-0.000014640		
3D5/2			4.592157646	0.004871000	-0.000100310		
4S1/2			2.651520038	0.001649303	-0.000203180		
4P1/2			2.668068102	0.000729097	-0.000053489		
4P3/2			2.460466699	0.001375031	-0.000195999		
4D3/2			2.480691920	0.000635352	-0.000059172		
4D5/2			2.422661558	0.001417138	-0.000211801		
4F5/2			2.318620325	0.000512935	-0.000051694		
4F7/2			2.275303362	0.000490360	-0.000145932		
5S1/2			1.258443071	0.000300912	-0.000038790		
5P1/2			1.174429240	0.000121239	-0.000009871		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM	5D9 6S1	Z=78 A=195 R=1.31501E-04 A.U.					
5P3/2			1.068825749	0.000217307	-0.000032975		
5D3/2			0.775321875	0.000053354	-0.000005210		
5D5/2			0.737489819	0.000109083	-0.000017601		
6S1/2			0.412994798	0.000023900	-0.000003102		
3D3/2 -- (4)	229.331960	-560.877224	5.223107341	0.014848318		-0.000004634	0.000000707
3D5/2			5.209774061	0.002744815	-0.000000126		
4S1/2			2.726268329	0.000652427	-0.000016324		
4P1/2			2.711726203	0.001271179	-0.000088283		
4P3/2			2.552694469	0.000465506	-0.000011748		
4D3/2			2.494755589	0.001539530	-0.000145219		
4D5/2			2.492519971	0.000506511	-0.000007174		
4F5/2			2.306723355	0.002249362	-0.000556074		
4F7/2			2.320726520	0.000074250	-0.000008948		
5S1/2			1.271983857	0.000123554	-0.000003936		
5P1/2			1.181904302	0.000200359	-0.000014833		
5P3/2			1.082405351	0.000074061	-0.000002197		
5D3/2			0.776828193	0.000119110	-0.000012147		
5D5/2			0.742608334	0.000037721	-0.000000620		
6S1/2			0.414069284	0.000009865	-0.000000325		
3D5/2 -- (6)	216.431418	-541.573944	5.101166876	0.012507460		-0.000000876	0.000000200
4S1/2			2.713793927	0.000769780	-0.000016394		
4P1/2			2.721080027	0.000542910	-0.000008075		
4P3/2			2.531640594	0.000917629	-0.000038722		
4D3/2			2.534754527	0.000414849	-0.000007799		
4D5/2			2.448356088	0.001381224	-0.000092983		
4F5/2			2.344906547	0.000469254	-0.000034948		
4F7/2			2.284193294	0.001402283	-0.000389680		
5S1/2			1.269648740	0.000142653	-0.000003942		
5P1/2			1.182918034	0.000088358	-0.000001740		
5P3/2			1.079294441	0.000140563	-0.000006566		
5D3/2			0.779547427	0.000032649	-0.000000716		
5D5/2			0.739602481	0.000100032	-0.000007305		
6S1/2			0.413883051	0.000011355	-0.000000325		
4S1/2 -- (2)	97.359124	-278.692434	2.159803879	0.000745098		-0.011486994	0.000394292
4P1/2			1.911235555	0.000348656	-0.000020362		
4P3/2			1.835539536	0.000440677	-0.000070341		
4D3/2			1.943149447	0.000325793	-0.000030005		
4D5/2			1.917297541	0.000291118	-0.000032770		
4F5/2			1.896564410	0.000219058	-0.000020202		
4F7/2			1.881569958	0.000209233	-0.000020420		
5S1/2			1.141050996	0.000102708	-0.000044115		
5P1/2			1.085680847	0.000083635	-0.000016459		
5P3/2			0.998362066	0.000058973	-0.000009730		
5D3/2			0.739818370	0.000015075	-0.000001655		
5D5/2			0.706007173	0.000019869	-0.000001604		
6S1/2			0.404000834	0.000008248	-0.000003636		
4P1/2 -- (2)	92.700323	-270.317170	2.147568665	0.001353057		-0.001340650	0.000067369
4P3/2			1.955359025	0.000162345	-0.000001788		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 509 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
4D3/2			1.819025752	0.000756667	-0.000126991		
4D5/2			1.953543641	0.000179265	-0.000005006		
4F5/2			1.855649021	0.000350495	-0.000048917		
4F7/2			1.891824164	0.000147001	-0.000005658		
5S1/2			1.158271115	0.000120619	-0.000017589		
5P1/2			1.066794551	0.000116314	-0.000032768		
5P3/2			1.003197159	0.000035725	-0.000002532		
5D3/2			0.736647565	0.000028667	-0.000004208		
5D5/2			0.706935843	0.000014560	-0.000000500		
6S1/2			0.405184873	0.000009354	-0.000001421		
4P3/2 -- (4)	74.497691	-240.914994	1.915916368	0.000697736		-0.000088455	0.000010401
4D3/2			1.892056192	0.000201130	-0.000007701		
4D5/2			1.792125301	0.000441959	-0.000043659		
4F5/2			1.832809621	0.000156319	-0.000008488		
4F7/2			1.795262301	0.000248673	-0.000024550		
5S1/2			1.143863644	0.000172105	-0.000025569		
5P1/2			1.077569209	0.000049297	-0.000004350		
5P3/2			0.984016527	0.000080248	-0.000013772		
5D3/2			0.735888186	0.000011651	-0.000000894		
5D5/2			0.701025240	0.000027790	-0.000002241		
6S1/2			0.404106407	0.000012946	-0.000001984		
4D3/2 -- (4)	66.404675	-224.987465	1.881699209	0.000894017		-0.000001221	0.000000186
4D5/2			1.878709025	0.000166414	-0.000000016		
4F5/2			1.730224852	0.000474018	-0.000063556		
4F7/2			1.814680651	0.000123077	-0.000001179		
5S1/2			1.144318959	0.000059012	-0.000002042		
5P1/2			1.066939855	0.000121955	-0.000012908		
5P3/2			0.992382229	0.000032121	-0.000001314		
5D3/2			0.727871710	0.000043680	-0.000004563		
5D5/2			0.702201710	0.000012821	-0.000000217		
6S1/2			0.404145468	0.000004522	-0.000000191		
4D5/2 -- (6)	62.625147	-218.149728	1.844356278	0.000748295		-0.000000229	0.000000052
4F5/2			1.802176522	0.000127430	-0.000003610		
4F7/2			1.725603925	0.000383598	-0.000041617		
5S1/2			1.139236610	0.000069985	-0.000001945		
5P1/2			1.071926909	0.000038090	-0.000000770		
5P3/2			0.985517430	0.000072065	-0.000005311		
5D3/2			0.733869723	0.000011604	-0.000000262		
5D5/2			0.696223785	0.0000036735	-0.000002724		
6S1/2			0.403775673	0.000005227	-0.000000188		
4F5/2 -- (6)	48.002330	-187.726484	1.734763901	0.000729920		-0.000000000	0.000000000
4F7/2			1.751393165	0.000114668	-0.000000000		
5S1/2			1.122985421	0.000034181	-0.000000029		
5P1/2			1.049650199	0.000043490	-0.000000002		
5P3/2			0.977466908	0.000020511	-0.000000007		
5D3/2			0.723907243	0.000025278	-0.000000646		
5D5/2			0.695908194	0.000007848	-0.000000043		
6S1/2			0.402710044	0.000002644	-0.000000005		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLATINUM 5D9 6S1 Z=78 A=195 R=1.31501E-04 A.U.							
4F7/2 -- (8)	46.743418	-185.038394	1.718774510	0.000669751		-0.000000000	0.000000000
5S1/2			1.119691320	0.000043551	-0.000000038		
5P1/2			1.054739764	0.000028287	-0.000000000		
5P3/2			0.972242221	0.000035923	-0.000000014		
5D3/2			0.727474777	0.000009590	-0.000000017		
5D5/2			0.692205395	0.000021453	-0.000000048		
6S1/2			0.402477880	0.000003175	-0.000000005		
5S1/2 -- (2)	23.425748	-112.042144	0.943097902	0.000052100		-0.002257442	0.000077452
5P1/2			0.800213880	0.000042451	-0.000004951		
5P3/2			0.763544914	0.000039816	-0.000009940		
5D3/2			0.648821567	0.000022512	-0.000003020		
5D5/2			0.625232660	0.000010658	-0.000002849		
6S1/2			0.383632580	0.000002961	-0.000001339		
5P1/2 -- (2)	19.726859	-102.025802	0.870127732	0.000078241		-0.000229822	0.000011541
5P3/2			0.784553415	0.000009097	-0.000000124		
5D3/2			0.601409358	0.000055232	-0.000012671		
5D5/2			0.620529788	0.000003789	-0.000000421		
6S1/2			0.384291434	0.000005138	-0.000000764		
5P3/2 -- (4)	15.369165	-91.128540	0.764114689	0.000038611		-0.000014476	0.000001701
5S1/2			0.620060008	0.000013327	-0.000001137		
5D3/2			0.577699675	0.000022447	-0.000005391		
6S1/2			0.380049402	0.000006808	-0.000001018		
5D3/2 -- (4)	7.563862	-62.985448	0.531971292	0.000019688		-0.000000103	0.000000016
5D5/2			0.523235474	0.000003455	-0.000000000		
6S1/2			0.355880105	0.000001317	-0.000000001		
5D5/2 -- (5)	6.754286	-59.703934	0.506218928	0.000015186		-0.000000018	0.000000004
6S1/2			0.350760788	0.000001985	-0.000000000		
6S1/2 -- (1)	2.236784	-33.325444	0.030000000	0.000000000		-0.000181237	0.000006218
ETDT	-18417.42463	21067.97950	-46337.50297	6834.69736	23.171016954	-2.459727144	-3.436142181
GOLD 6S1 Z=79 A=197 R=1.31949E-04 A.U.							
1S1/2 -- (2)	4118.876146	-7551.350159	56.449201627	7.187481074		-1.520041310	0.057175852
2S1/2			17.550637548	0.384089935	-0.046030122		
2P1/2			21.410193731	0.796265185	-0.107309831		
2P3/2			18.163894946	0.362639127	-0.104836523		
3S1/2			7.322393540	0.083152954	-0.010660114		
3P1/2			8.076676299	0.158944343	-0.021234217		
3P3/2			7.188016384	0.078032441	-0.023259445		
3D3/2			7.304987156	0.003541063	-0.000420861		
3D5/2			7.048203800	0.001410437	-0.000452405		
4S1/2			3.323874427	0.020931846	-0.002722169		
4P1/2			3.430928195	0.037786334	-0.005038793		
4P3/2			3.095559432	0.018457473	-0.005538300		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
			2.945494048	0.000900444	-0.000107465		
			2.854477659	0.000356515	-0.000115385		
			2.480001485	0.000002162	-0.000000236		
			2.444391362	0.000000820	-0.000000270		
			1.414809441	0.004195446	-0.000547405		
			1.332866895	0.006594431	-0.000879020		
			1.195997955	0.003079675	-0.000925360		
			0.848483868	0.000080802	-0.000009650		
			0.804267704	0.000030333	-0.000009735		
			0.432488860	0.000332303	-0.000043342		
2S1/2 --	(2)	980.910384	-1856.426628	12.867170218	0.144232341	-0.215561702	0.007660312
	2P1/2			12.762735179	0.044076072	-0.000074012	
	2P3/2			11.910258814	0.065734254	-0.001489749	
	3S1/2			6.097844038	0.017050303	-0.004150487	
	3P1/2			6.658406572	0.028623586	-0.004463760	
	3P3/2			6.177319702	0.020399817	-0.002471048	
	3D3/2			6.843491829	0.017723584	-0.002440478	
	3D5/2			6.652117053	0.007718779	-0.002407485	
	4S1/2			3.028760915	0.004255566	-0.001089873	
	4P1/2			3.099184812	0.007055748	-0.001132878	
	4P3/2			2.863038235	0.004945089	-0.000666813	
	4D3/2			2.846178078	0.003293149	-0.000479081	
	4D5/2			2.769993552	0.001501285	-0.000477717	
	4F5/2			2.477293595	0.000179380	-0.000023651	
	4F7/2			2.441949382	0.000064692	-0.000022957	
	5S1/2			1.356164980	0.000851077	-0.000219997	
	5P1/2			1.275142253	0.001238523	-0.000199890	
	5P3/2			1.157401865	0.000827874	-0.000113794	
	5D3/2			0.839796295	0.000281158	-0.000041273	
	5D5/2			0.797331734	0.000121600	-0.000038752	
	6S1/2			0.427854421	0.000067324	-0.000017428	
2P1/2 --	(2)	979.556508	-1854.724052	15.786295715	0.328792741	-0.023658037	0.001237609
	2P3/2			13.971293969	0.043151346	-0.000088413	
	3S1/2			6.471031014	0.011611925	-0.000827406	
	3P1/2			6.651864015	0.026819792	-0.004024625	
	3P3/2			6.434401144	0.010102994	-0.000273335	
	3D3/2			6.847771932	0.052776988	-0.012567021	
	3D5/2			6.839113782	0.001631039	-0.000374990	
	4S1/2			3.113238933	0.002883592	-0.000228803	
	4P1/2			3.106347896	0.006160381	-0.001012786	
	4P3/2			2.920972137	0.002383687	-0.000076081	
	4D3/2			2.849467298	0.010425523	-0.002555637	
	4D5/2			2.807951871	0.000377136	-0.000081493	
	4F5/2			2.477849442	0.000212113	-0.000044520	
	4F7/2			2.443259217	0.000011828	-0.000004485	
	5S1/2			1.372734375	0.000576050	-0.000046720	
	5P1/2			1.276664319	0.001067576	-0.000178486	
	5P3/2			1.166981106	0.000397373	-0.000013074	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
	5D3/2		0.840115913	0.000899229	-0.000221446		
	5D5/2		0.800423734	0.000031391	-0.000006711		
	6S1/2		0.429161082	0.000045560	-0.000003708		
2P3/2 -- (4)	718.632186	-1511.371150	13.258590109	0.158123955		-0.001470009	0.000180665
	3S1/2		6.325241083	0.014556338	-0.001084877		
	3P1/2		6.770302513	0.008966288	-0.000408033		
	3P3/2		6.153317308	0.018959599	-0.001750664		
	3D3/2		6.937073510	0.015683765	-0.001541533		
	3D5/2		6.617100530	0.026114841	-0.007420979		
	4S1/2		3.0777711726	0.003448215	-0.000277743		
	4P1/2		3.124263627	0.002077486	-0.000109223		
	4P3/2		2.860919682	0.004259797	-0.000435406		
	4D3/2		2.865422016	0.003035268	-0.000301213		
	4D5/2		2.765455030	0.004938531	-0.001448568		
	4F5/2		2.477728394	0.000137781	-0.000013506		
	4F7/2		2.441702658	0.000119375	-0.000038546		
	5S1/2		1.365658484	0.000682251	-0.000055901		
	5P1/2		1.279467399	0.000360771	-0.000019504		
	5P3/2		1.157151325	0.000703467	-0.000073236		
	5D3/2		0.841465512	0.000261128	-0.000025962		
	5D5/2		0.796991410	0.000398106	-0.000117305		
	6S1/2		0.428601700	0.000053876	-0.000004427		
3S1/2 -- (2)	311.164895	-681.324269	4.897744826	0.009047893		-0.048902431	0.001723555
	3P1/2		4.502859911	0.003137814	-0.000048614		
	3P3/2		4.296884865	0.004604954	-0.000338304		
	3D3/2		4.912109623	0.002868558	-0.000088910		
	3D5/2		4.848135120	0.003812956	-0.000107037		
	4S1/2		2.659084216	0.001439721	-0.0000512705		
	4P1/2		2.724347642	0.001910412	-0.000333767		
	4P3/2		2.540367268	0.001386060	-0.000168741		
	4D3/2		2.542448586	0.000791777	-0.000077159		
	4D5/2		2.488742519	0.000770035	-0.000067118		
	4F5/2		2.392444181	0.000639337	-0.000089521		
	4F7/2		2.362314323	0.000291042	-0.000087346		
	5S1/2		1.286315953	0.000286672	-0.000105593		
	5P1/2		1.211572397	0.000348012	-0.000062627		
	5P3/2		1.105152328	0.000240926	-0.000031331		
	5D3/2		0.814008132	0.000072494	-0.000007580		
	5D5/2		0.774899824	0.000062195	-0.000006232		
	6S1/2		0.422373332	0.000022653	-0.000008379		
3P1/2 -- (2)	306.814555	-675.058352	5.190445278	0.017932606		-0.006003161	0.000309602
	3P3/2		4.714248189	0.002243882	-0.000014312		
	3D3/2		4.803315287	0.006399494	-0.000435555		
	3D5/2		5.083262438	0.002856204	-0.000019051		
	4S1/2		2.743121284	0.001240244	-0.000151464		
	4P1/2		2.680053228	0.002016112	-0.000466029		
	4P3/2		2.578950159	0.000676976	-0.000036402		
	4D3/2		2.556873990	0.001854159	-0.000280534		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
4D5/2			2.515103089	0.000512689	-0.000018062		
4F5/2			2.384991967	0.001037589	-0.000239144		
4F7/2			2.380206327	0.000120146	-0.000025327		
5S1/2			1.300772264	0.000240855	-0.000031503		
5P1/2			1.205834258	0.000344555	-0.000084051		
5P3/2			1.111074780	0.000114099	-0.000006862		
5D3/2			0.815319138	0.000171806	-0.000027712		
5D5/2			0.776988189	0.000040488	-0.000001665		
6S1/2			0.423492029	0.000018963	-0.000002505		
3P3/2 -- (4)	242.473540	-585.485542	4.594285703	0.009212177		-0.000390391	0.000047295
3D3/2			4.880763793	0.002074765	-0.000014983		
3D5/2			4.665895053	0.005102093	-0.000104136		
4S1/2			2.702161343	0.001752507	-0.000216933		
4P1/2			2.721327758	0.000774651	-0.000057048		
4P3/2			2.505558845	0.001451667	-0.000207255		
4D3/2			2.531763959	0.000677483	-0.000063203		
4D5/2			2.471612122	0.001505593	-0.000225780		
4F5/2			2.386917632	0.000556286	-0.000056058		
4F7/2			2.342094337	0.000532369	-0.000158328		
5S1/2			1.293027490	0.000326399	-0.000042280		
5P1/2			1.210882590	0.000132479	-0.000010836		
5P3/2			1.100068686	0.000236075	-0.000035902		
5D3/2			0.813127515	0.000061044	-0.000005975		
5D5/2			0.773571886	0.000124451	-0.000020176		
6S1/2			0.422883964	0.000025553	-0.000003333		
3D3/2 -- (4)	236.979379	-577.654391	5.311092595	0.015584417		-0.000005206	0.000000816
3D5/2			5.295504247	0.002876700	-0.000000140		
4S1/2			2.779062558	0.000689860	-0.000017321		
4P1/2			2.766542852	0.001348612	-0.000094187		
4P3/2			2.600212255	0.000491254	-0.000012417		
4D3/2			2.546670198	0.001632363	-0.000154530		
4D5/2			2.543715208	0.000536891	-0.000007630		
4F5/2			2.374767827	0.002442982	-0.000604073		
4F7/2			2.390127762	0.00080912	-0.000009729		
5S1/2			1.307259424	0.000133519	-0.000004277		
5P1/2			1.218846423	0.000218502	-0.000016273		
5P3/2			1.114401417	0.000080443	-0.000002396		
5D3/2			0.814834010	0.000135316	-0.000013871		
5D5/2			0.779240939	0.000042919	-0.000000710		
6S1/2			0.423997224	0.000010510	-0.000000349		
3D5/2 -- (6)	223.306062	-557.232340	5.183136993	0.013105541		-0.000000977	0.000000229
4S1/2			2.765929325	0.000813173	-0.000017396		
4P1/2			2.775717315	0.000574447	-0.000008582		
4P3/2			2.578381520	0.000967357	-0.000040900		
4D3/2			2.587361194	0.000439593	-0.000008306		
4D5/2			2.498107086	0.001462137	-0.000098829		
4F5/2			2.414733356	0.000509939	-0.000037946		
4F7/2			2.351597707	0.001523375	-0.000042368		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
			1.304746616	0.000153961	-0.000004283		
			1.219838658	0.000096167	-0.000001909		
			1.111680658	0.000152422	-0.000007145		
			0.817784578	0.000037085	-0.000000820		
			0.775914079	0.000113580	-0.000008342		
			0.423799640	0.000012082	-0.000000349		
4S1/2 -- (2)	101.674838	-288.557589	2.202311522	0.000792005		-0.012448617	0.000437892
4P1/2			1.949983977	0.000368099	-0.000021125		
4P3/2			1.870938135	0.000468896	-0.000075887		
4D3/2			1.983316219	0.000345775	-0.000031784		
4D5/2			1.956481541	0.000309134	-0.000034820		
4F5/2			1.948285831	0.000234848	-0.000021454		
4F7/2			1.933104867	0.000226145	-0.000021718		
5S1/2			1.171666618	0.000111786	-0.000048106		
5P1/2			1.117915863	0.000092802	-0.000018266		
5P3/2			1.026483661	0.000063978	-0.000010687		
5D3/2			0.774353293	0.000017194	-0.000001895		
5D5/2			0.739178819	0.000022703	-0.000001837		
6S1/2			0.413677958	0.000008850	-0.000003909		
4P1/2 -- (2)	96.931622	-280.092668	2.192096975	0.001441453		-0.001503800	0.000077300
4P3/2			1.993923113	0.000170448	-0.000002016		
4D3/2			1.857534319	0.000805845	-0.000135401		
4D5/2			1.994378300	0.000190290	-0.000005359		
4F5/2			1.906982464	0.000376143	-0.000051997		
4F7/2			1.944500416	0.000159418	-0.000006034		
5S1/2			1.189131772	0.000130660	-0.000019087		
5P1/2			1.098301738	0.000127719	-0.000036127		
5P3/2			1.031667822	0.000038695	-0.000002784		
5D3/2			0.770979985	0.000032751	-0.000004833		
5D5/2			0.740236638	0.000016634	-0.000000579		
6S1/2			0.414900427	0.000009987	-0.000001521		
4P3/2 -- (4)	77.447019	-248.786050	1.951892004	0.000738693		-0.000096759	0.000011682
4D3/2			1.930221138	0.000212196	-0.000007979		
4D5/2			1.827960396	0.000467985	-0.000045611		
4F5/2			1.881212504	0.000166832	-0.000008883		
4F7/2			1.842923806	0.000267400	-0.000025725		
5S1/2			1.173771263	0.000187909	-0.000028019		
5P1/2			1.109195335	0.000054297	-0.000004821		
5P3/2			1.011401383	0.000087558	-0.000015122		
5D3/2			0.769978036	0.000013415	-0.000001046		
5D5/2			0.733691464	0.000031997	-0.000002614		
6S1/2			0.413767601	0.000013911	-0.000002141		
4D3/2 -- (4)	69.294375	-232.838294	1.922245350	0.000952756		-0.000001388	0.000000217
4D5/2			1.918753975	0.000177051	-0.000000018		
4F5/2			1.778295135	0.000505753	-0.0000366509		
4F7/2			1.865162231	0.000133550	-0.000001242		
5S1/2			1.174837498	0.000064145	-0.000002249		
5P1/2			1.098610616	0.000133868	-0.000014256		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
GOLD	6S1	Z=79 A=197 R=1.31949E-04 A.U.					
	5P3/2		1.020497799	0.000035014	-0.000001440		
	5D3/2		0.761455679	0.000049914	-0.000005294		
	5D5/2		0.735103492	0.000014666	-0.000000253		
	6S1/2		0.413849067	0.000004843	-0.000000207		
4D5/2 -- (6)	65.276726	-225.611831	1.883271908	0.000796490		-0.000000259	0.000000061
	4F5/2		1.851518409	0.000136359	-0.000003757		
	4F7/2		1.773174048	0.000410930	-0.000043386		
	5S1/2		1.169472970	0.000075949	-0.000002198		
	5P1/2		1.103674619	0.000041691	-0.000000855		
	5P3/2		1.013306071	0.000078485	-0.000005809		
	5D3/2		0.767913049	0.000013257	-0.000000305		
	5D5/2		0.728580285	0.000041951	-0.000003162		
	6S1/2		0.413464104	0.000005588	-0.000000205		
4F5/2 -- (6)	50.824993	-195.920435	1.793080090	0.000799765		-0.000000000	0.000000000
	4F7/2		1.810483790	0.000125972	-0.000000000		
	5S1/2		1.155871674	0.000037401	-0.000000019		
	5P1/2		1.083433191	0.000047958	-0.000000010		
	5P3/2		1.007089354	0.000022586	-0.000000013		
	5D3/2		0.758359720	0.000029083	-0.000000793		
	5D5/2		0.729138532	0.000009057	-0.000000053		
	6S1/2		0.412593098	0.000002853	-0.000000006		
4F7/2 -- (8)	49.488615	-193.107191	1.776762857	0.000734014		-0.000000000	0.000000000
	5S1/2		1.152548356	0.000047498	-0.000000026		
	5P1/2		1.088462423	0.000031087	-0.000000001		
	5P3/2		1.001868764	0.000039348	-0.000000027		
	5D3/2		0.762001029	0.000010988	-0.000000021		
	5D5/2		0.725297024	0.000024626	-0.000000500		
	6S1/2		0.412361204	0.000003418	-0.000000006		
5S1/2 -- (2)	24.993175	-116.979410	0.969019681	0.000056942		-0.002501688	0.000087959
	5P1/2		0.823701284	0.000045732	-0.000005273		
	5P3/2		0.785321136	0.000043802	-0.000010945		
	5D3/2		0.676573583	0.000025376	-0.000003397		
	5D5/2		0.652322833	0.000012119	-0.000003217		
	6S1/2		0.393132641	0.000003208	-0.000001456		
5P1/2 -- (2)	21.196541	-106.885515	0.897116693	0.000086356		-0.000265422	0.000013634
	5P3/2		0.808102419	0.000009867	-0.000000146		
	5D3/2		0.627028391	0.000062305	-0.000014270		
	5D5/2		0.647889450	0.000004355	-0.000000477		
	6S1/2		0.393922071	0.000005528	-0.000000824		
5P3/2 -- (4)	16.424878	-95.193119	0.786350227	0.000042343		-0.000016304	0.000001967
	5D3/2		0.646199147	0.000014851	-0.000001252		
	5D5/2		0.602042668	0.000025163	-0.000005982		
	6S1/2		0.389548091	0.000007418	-0.000001113		
5D3/2 -- (4)	8.404283	-67.043198	0.558627822	0.000022829		-0.000000126	0.000000020
	5D5/2		0.549553862	0.000004008	-0.000000000		
	6S1/2		0.366789894	0.000001466	-0.000000002		
5D5/2 -- (6)	7.504200	-63.546267	0.531778088	0.000017613		-0.000000022	0.000000005
	6S1/2		0.361724910	0.000002197	-0.000000000		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
GOLD								
6S1	Z=79	A=197	R=1.31949E-04	A.U.				
6S1/2 -- (1)	2.353750	-34.578918	0.000000000	0.000000000		-0.000198055	0.000006963	
ETOT	-19017.33681	21842.59452	-47929.58595	7051.51518	24.244861057	-2.573951488	-3.669898673	0.138426811
MERCURY								
6S2	Z=80	A=200	R=1.32616E-04	A.U.				
1S1/2 -- (2)	4262.430496	-7792.304526	57.420721045	7.491386065		-1.619388071	0.062458020	
2S1/2			17.871999182	0.461723410	-0.048236749			
2P1/2			21.833705046	0.832610278	-0.111609751			
2P3/2			18.428783505	0.377089024	-0.109009347			
3S1/2			7.460174761	0.087170312	-0.011196217			
3P1/2			8.238144865	0.166482870	-0.022106882			
3P3/2			7.305363831	0.081537965	-0.024303139			
3D3/2			7.426600906	0.003697918	-0.000437664			
3D5/2			7.158526802	0.001471232	-0.000471850			
4S1/2			3.392400750	0.022056636	-0.002873936			
4P1/2			3.506860470	0.039818122	-0.005276769			
4P3/2			3.155333815	0.019422673	-0.005827800			
4D3/2			3.008751777	0.000951446	-0.000113074			
4D5/2			2.913823618	0.000376443	-0.000121826			
4F5/2			2.552456562	0.000002356	-0.000000256			
4F7/2			2.515624013	0.000000894	-0.000000295			
5S1/2			1.457237635	0.004525662	-0.000591644			
5P1/2			1.379575677	0.007171613	-0.000949983			
5P3/2			1.236371753	0.003354683	-0.001007999			
5D3/2			0.908760474	0.000095392	-0.000011345			
5D5/2			0.865539018	0.000035833	-0.000011614			
6S1/2			0.461684836	0.000393611	-0.000051486			
2S1/2 -- (2)	1018.520841	-1919.593101	13.094258115	0.151577688		-0.231524488	0.008428720	
2P1/2			12.996886468	0.046319116	-0.000075690			
2P3/2			12.101080232	0.068616228	-0.001622104			
3S1/2			6.206649218	0.017957819	-0.004368078			
3P1/2			6.782252960	0.030211864	-0.004706580			
3P3/2			6.278000312	0.021243912	-0.002559359			
3D3/2			6.957909657	0.018566245	-0.002554995			
3D5/2			6.757978154	0.008071819	-0.002519933			
4S1/2			3.088673227	0.004505155	-0.001153093			
4P1/2			3.164102178	0.007492079	-0.001201632			
4P3/2			2.917335917	0.005189777	-0.000696875			
4D3/2			2.906706619	0.003487400	-0.000507111			
4D5/2			2.827369144	0.001588149	-0.000505971			
4F5/2			2.549604502	0.000194829	-0.000025674			
4F7/2			2.513057211	0.000070233	-0.000024930			
5S1/2			1.395452999	0.000922318	-0.000238296			
5P1/2			1.318620048	0.001357315	-0.000218834			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80 A=200 R=1.32616E-04 A.U.					
5P3/2			1.195480860	0.000899551	-0.000123185		
5D3/2			0.898793720	0.000332199	-0.000048756		
5D5/2			0.857524642	0.000145189	-0.000046330		
6S1/2			0.456318871	0.000080186	-0.000020749		
2P1/2 -- (2)	1017.107662	-1917.857669	16.083358074	0.345701691		-0.026247626	0.001404540
2P3/2			14.198585741	0.044875497	-0.000097676		
3S1/2			6.589590893	0.012229250	-0.000869003		
3P1/2			6.776163526	0.028282311	-0.004238850		
3P3/2			6.540972010	0.010561502	-0.000285258		
3D3/2			6.963191744	0.055230741	-0.013151053		
3D5/2			6.947708607	0.001698355	-0.000391804		
4S1/2			3.175829285	0.003053021	-0.000241679		
4P1/2			3.171653930	0.006536581	-0.001073582		
4P3/2			2.977001130	0.002510030	-0.000080005		
4D3/2			2.910280376	0.011034119	-0.002704987		
4D5/2			2.866346519	0.000397356	-0.000086166		
4F5/2			2.550196453	0.000229929	-0.000048259		
4F7/2			2.514437615	0.000012808	-0.000004860		
5S1/2			1.412949874	0.000624347	-0.000050533		
5P1/2			1.319673851	0.001168991	-0.000195299		
5P3/2			1.205691652	0.000433162	-0.000014239		
5D3/2			0.899180137	0.001062213	-0.000261632		
5D5/2			0.861109032	0.000037358	-0.000008013		
6S1/2			0.457835123	0.000054270	-0.000004409		
2P3/2 -- (4)	739.085993	-1552.552058	13.448000217	0.164652944		-0.001586409	0.000200224
3S1/2			6.435693409	0.015301946	-0.001149085		
3P1/2			6.891748191	0.009417013	-0.000430196		
3P3/2			6.249913321	0.019812696	-0.001831962		
3D3/2			7.050317904	0.016421285	-0.001611459		
3D5/2			6.719535076	0.027313967	-0.007762181		
4S1/2			3.138129054	0.003640131	-0.000295143		
4P1/2			3.188763591	0.002194366	-0.000115794		
4P3/2			2.914333483	0.004480568	-0.000458726		
4D3/2			2.925944416	0.003208610	-0.000317879		
4D5/2			2.822164494	0.005218392	-0.001531056		
4F5/2			2.550034532	0.000150619	-0.000014753		
4F7/2			2.512765279	0.000130439	-0.000042131		
5S1/2			1.405263469	0.000737061	-0.000060791		
5P1/2			1.322407626	0.000393231	-0.000021344		
5P3/2			1.195074250	0.000765755	-0.000079875		
5D3/2			0.900656539	0.000307992	-0.000030570		
5D5/2			0.857081552	0.000474657	-0.000139917		
6S1/2			0.457167314	0.000063962	-0.000005291		
3S1/2 -- (2)	323.474902	-704.362656	4.984631856	0.009542994		-0.052691798	0.001902261
3P1/2			4.584817956	0.003303542	-0.000049951		
3P3/2			4.368961326	0.004834598	-0.000365758		
3D3/2			4.996705603	0.003016061	-0.000094128		
3D5/2			4.929760912	0.004001371	-0.000113799		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	652	Z=80 A=200 R=1.32616E-04 A.U.					
4S1/2			2.710125457	0.001526303	-0.000543224		
4P1/2			2.779295024	0.002037133	-0.000355649		
4P3/2			2.587233697	0.001450443	-0.000176796		
4D3/2			2.594942414	0.000839498	-0.000081820		
4D5/2			2.539175477	0.000816245	-0.000070962		
4F5/2			2.460691340	0.000691752	-0.000096895		
4F7/2			2.429686237	0.000315167	-0.000094577		
5S1/2			1.322261282	0.000311081	-0.000114538		
5P1/2			1.250681738	0.000383016	-0.000068891		
5P3/2			1.140168231	0.000261226	-0.000034023		
5D3/2			0.869262288	0.000085899	-0.000008996		
5D5/2			0.831591436	0.000074403	-0.000007462		
6S1/2			0.450008724	0.000027015	-0.000009991		
3P1/2 -- (2)	319.032700	-698.005742	5.286205143	0.018927994		-0.006684536	0.000352501
3P3/2			4.794602165	0.002336198	-0.000015937		
3D3/2			4.887199861	0.006743588	-0.000465048		
3D5/2			5.170315097	0.002996048	-0.000020415		
4S1/2			2.796522647	0.001312149	-0.000160073		
4P1/2			2.734125221	0.002142087	-0.000494984		
4P3/2			2.627049841	0.000710485	-0.000038423		
4D3/2			2.610021702	0.001959511	-0.000296064		
4D5/2			2.566464534	0.000544335	-0.000019129		
4F5/2			2.453082314	0.001176881	-0.000258888		
4F7/2			2.448534280	0.000130137	-0.000027430		
5S1/2			1.337463412	0.000260845	-0.000034104		
5P1/2			1.244675550	0.000377735	-0.000092156		
5P3/2			1.146489265	0.000124028	-0.000007507		
5D3/2			0.870792324	0.000203018	-0.000032754		
5D5/2			0.834029760	0.000048493	-0.000001997		
6S1/2			0.451300513	0.000022567	-0.000002981		
3P3/2 -- (4)	250.315564	-602.580822	4.666796901	0.009650240		-0.000423491	0.000052666
3D3/2			4.959518873	0.002171858	-0.000015330		
3D5/2			4.739756356	0.005340545	-0.000108103		
4S1/2			2.753293683	0.001861487	-0.000231533		
4P1/2			2.775114892	0.000822660	-0.000060809		
4P3/2			2.550918628	0.001531570	-0.000219007		
4D3/2			2.583102337	0.000721692	-0.000067437		
4D5/2			2.520773434	0.001597999	-0.000240409		
4F5/2			2.454385223	0.000601567	-0.000360615		
4F7/2			2.407998931	0.000576273	-0.000171274		
5S1/2			1.329100975	0.000354308	-0.000046118		
5P1/2			1.249765789	0.000145067	-0.000011920		
5P3/2			1.134673274	0.000257721	-0.000039281		
5D3/2			0.868172783	0.000072606	-0.000007123		
5D5/2			0.829981132	0.000149094	-0.000024286		
6S1/2			0.450579167	0.000030467	-0.000003994		
3D3/2 -- (4)	244.772718	-594.707883	5.399320198	0.016345556		-0.000005839	0.000000940
3D5/2			5.381375944	0.003012708	-0.000000156		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80 A=200 R=1.32616E-04 A.U.					
4S1/2			2.832391133	0.000729048	-0.000018367		
4P1/2			2.821921132	0.001430046	-0.000100445		
4P3/2			2.648032446	0.000518091	-0.000013116		
4D3/2			2.598868329	0.001729331	-0.000164285		
4D5/2			2.595152701	0.000568596	-0.000008107		
4F5/2			2.442007322	0.002645610	-0.000654315		
4F7/2			2.458656715	0.000087899	-0.000010547		
5S1/2			1.344072972	0.000144375	-0.000004650		
5P1/2			1.258268939	0.000238786	-0.000017892		
5P3/2			1.149879596	0.000087803	-0.000002625		
5D3/2			0.870181643	0.000159814	-0.000016466		
5D5/2			0.836576668	0.000051281	-0.000000854		
6S1/2			0.451865660	0.000012487	-0.000000417		
3D5/2 -- (6)	230.291385	-573.117631	5.265155246	0.013722298		-0.000001087	0.000000262
4S1/2			2.818569521	0.000858540	-0.000018448		
4P1/2			2.830894032	0.000607446	-0.000009113		
4P3/2			2.625399278	0.001019114	-0.000043176		
4D3/2			2.640240507	0.000465410	-0.000008837		
4D5/2			2.548066668	0.001546456	-0.000104944		
4F5/2			2.483736655	0.000552540	-0.000041081		
4F7/2			2.418117433	0.001650043	-0.000458611		
5S1/2			1.341366859	0.000166264	-0.000004657		
5P1/2			1.259235467	0.000104877	-0.000002098		
5P3/2			1.146316220	0.000166090	-0.000007814		
5D3/2			0.873509759	0.000043792	-0.000000976		
5D5/2			0.832708255	0.000135421	-0.000010003		
6S1/2			0.451631862	0.000014334	-0.000000417		
4S1/2 -- (2)	106.154515	-298.695007	2.245286540	0.000841461		-0.013486031	0.000485899
4P1/2			1.989172454	0.000388472	-0.000021905		
4P3/2			1.906654662	0.000498790	-0.000081870		
4D3/2			2.023801743	0.000366793	-0.000033661		
4D5/2			1.995951761	0.000327991	-0.000036990		
4F5/2			1.999569007	0.000251289	-0.000022745		
4F7/2			1.984162208	0.000243824	-0.000023059		
5S1/2			1.202267261	0.000121744	-0.000052489		
5P1/2			1.152146490	0.000103173	-0.000020309		
5P3/2			1.057424973	0.000069734	-0.000011797		
5D3/2			0.824137588	0.000020394	-0.000002259		
5D5/2			0.790516351	0.000027244	-0.000002210		
6S1/2			0.440073786	0.000010591	-0.000004689		
4P1/2 -- (2)	101.326065	-290.140545	2.237130299	0.001534794		-0.001685666	0.000088589
4P3/2			2.032827281	0.000178821	-0.000002271		
4D3/2			1.896365413	0.000857852	-0.000144353		
4D5/2			2.035519125	0.000201789	-0.000005737		
4F5/2			1.957943823	0.000402904	-0.000055187		
4F7/2			1.996732138	0.000172427	-0.000006425		
5S1/2			1.221234116	0.000141631	-0.000020725		
5P1/2			1.131724874	0.000140534	-0.000039906		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY	6S2	Z=80 A=200 R=1.32616E-04 A.U.					
			1.063007225	0.000042110	-0.000003076		
			0.820408623	0.000038905	-0.000005774		
			0.791777809	0.000019955	-0.000000704		
			0.441478160	0.000011885	-0.000001816		
4P3/2 --	(4)	80.479058	1.988095516	0.000781540		-0.000105733	0.000013103
	4D3/2		1.968605371	0.000223718	-0.000008261		
	4D5/2		1.863985613	0.000495170	-0.000047624		
	4F5/2		1.929098736	0.000177705	-0.000009279		
	4F7/2		1.890056776	0.000286871	-0.000026904		
	5S1/2		1.204839843	0.000205327	-0.000030725		
	5P1/2		1.142743071	0.000059936	-0.000005354		
	5P3/2		1.041478143	0.000096001	-0.000016684		
	5D3/2		0.819068377	0.000016069	-0.000001274		
	5D5/2		0.784164520	0.000038705	-0.000003208		
	6S1/2		0.440151804	0.000016656	-0.000002575		
4D3/2 --	(4)	72.266199	1.963020580	0.001014388		-0.000001576	0.000000253
	4D5/2		1.959001360	0.000188178	-0.000000020		
	4F5/2		1.825992448	0.000538635	-0.000069483		
	4F7/2		1.915169465	0.000144516	-0.000001306		
	5S1/2		1.206542291	0.000069762	-0.000002477		
	5P1/2		1.132183548	0.000147237	-0.000015776		
	5P3/2		1.051389252	0.000038349	-0.000001586		
	5D3/2		0.809655283	0.000059280	-0.000006384		
	5D5/2		0.785922356	0.000017615	-0.000000310		
	6S1/2		0.440290031	0.000005779	-0.000000251		
4D5/2 --	(6)	67.998492	1.922363035	0.000846968		-0.000000292	0.000000070
	4F5/2		1.900401645	0.000145620	-0.000003902		
	4F7/2		1.820300250	0.000439304	-0.000045148		
	5S1/2		1.200872575	0.000082469	-0.000002422		
	5P1/2		1.137335353	0.000045723	-0.000000951		
	5P3/2		1.043812992	0.000085879	-0.000006383		
	5D3/2		0.816874135	0.000015743	-0.000000370		
	5D5/2		0.778451676	0.000050291	-0.000003856		
	6S1/2		0.439843407	0.000006656	-0.000000248		
4F5/2 --	(6)	53.701259	1.850641100	0.000873081		-0.000000000	0.000000000
	4F7/2		1.868778445	0.000137852	-0.000000000		
	5S1/2		1.189757597	0.000040918	-0.000000011		
	5P1/2		1.118967542	0.000052949	-0.000000025		
	5P3/2		1.039323141	0.000024968	-0.000000021		
	5D3/2		0.807373273	0.000034714	-0.000001001		
	5D5/2		0.780005536	0.000010962	-0.000000068		
	6S1/2		0.439073491	0.000003429	-0.000000008		
4F7/2 --	(8)	52.282960	1.833940971	0.000801421		-0.000000000	0.000000000
	5S1/2		1.186385202	0.000051790	-0.000000017		
	5P1/2		1.123955363	0.000034207	-0.000000002		
	5P3/2		1.034058828	0.000043273	-0.000000045		
	5D3/2		0.811241839	0.000013075	-0.000000028		
	5D5/2		0.775807517	0.000029627	-0.000000638		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MERCURY 6S2 Z=80 A=200 R=1.32616E-04 A.U.							
5S1/2 -- (2)	26.692009	-122.185658	0.438814169	0.000004096	-0.000000008	-0.002774639	0.000099923
5P1/2			0.996231867	0.000062346			
5P3/2			0.848672927	0.000049351	-0.000005620		
5D3/2			0.809025205	0.000048405	-0.000012104		
5D5/2			0.715356956	0.000029548	-0.000003948		
6S1/2			0.692876531	0.000014396	-0.000003791		
5P1/2 -- (2)	22.830859	-112.104689	0.417088338	0.000003891	-0.000001784	-0.000307138	0.000016129
5P3/2			0.926185322	0.000095686			
5D3/2			0.833999145	0.000010774	-0.000000174		
5D5/2			0.662331130	0.000072472	-0.000016570		
6S1/2			0.688745893	0.000005258	-0.000000565		
5P3/2 -- (4)	17.644102	-99.671148	0.418124761	0.000006644	-0.000000996	-0.000018446	0.000002284
5D3/2			0.811297811	0.000046799			
5D5/2			0.682791097	0.000017055	-0.000001417		
6S1/2			0.638212041	0.000029328	-0.000006878		
5D3/2 -- (4)	9.686451	-72.716019	0.413240361	0.000009019	-0.000001364	-0.000000159	0.000000026
5D5/2			0.599589141	0.000028026			
6S1/2			0.591794836	0.000004981	-0.000000001		
5D3/2 -- (6)	8.728977	-69.253830	0.392112553	0.000001868	-0.000000006	-0.000000028	0.000000007
5D5/2			0.574418460	0.000021943			
6S1/2 -- (2)	2.758433	-37.422482	0.387516860	0.000002755	-0.000000002	-0.000241431	0.000008694
ETOT	-19629.90296	22640.24166	-49553.66196	7264.61905	25.357407085	-2.692051311	-3.918637910
							0.151570572
THALLIUM 6P1 Z=81 A=205 R=1.33712E-04 A.U.							
1S1/2 -- (2)	4410.412761	-8039.521456	58.405395649	7.804933741		-1.724591401	0.068171828
2S1/2			18.198052065	0.420000046	-0.050529647		
2P1/2			22.264942270	0.870257844	-0.116017795		
2P3/2			18.694652938	0.391899463	-0.113285665		
3S1/2			7.599669818	0.091337374	-0.011753538		
3P1/2			8.401977984	0.174285163	-0.022999293		
3P3/2			7.423206021	0.085149570	-0.025378362		
3D3/2			7.548629007	0.003858320	-0.000454685		
3D5/2			7.268919584	0.001533292	-0.000491686		
4S1/2			3.461869481	0.023230154	-0.003032620		
4P1/2			3.583962638	0.041934339	-0.005521757		
4P3/2			3.215623646	0.020426106	-0.006128743		
4D3/2			3.072474285	0.001004301	-0.000118841		
4D5/2			2.973504672	0.000397078	-0.000128494		
4F5/2			2.624115114	0.000002559	-0.000000277		
4F7/2			2.585966195	0.000000973	-0.000000320		
5S1/2			1.500249441	0.004875075	-0.000638565		
5P1/2			1.427022019	0.007784096	-0.001024491		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81 A=205 R=1.33712E-04 A.U.					
			1.277469832	0.003648223	-0.001096203		
			0.970700999	0.000111788	-0.000013238		
			0.928617630	0.000042416	-0.000013747		
			0.504166251	0.000494102	-0.000064759		
			0.356716797	0.000391193	-0.000051483		
2S1/2 -- (2)	1057.448349	-1984.598079	13.324289924	0.159244793		-0.248596166	0.009267256
2P1/2			13.234479297	0.048661575	-0.000077375		
2P3/2			12.293371884	0.071594924	-0.001765719		
3S1/2			6.316602309	0.018905544	-0.004594904		
3P1/2			6.907559763	0.031873451	-0.004960118		
3P3/2			6.379177475	0.022106363	-0.002648332		
3D3/2			7.072840763	0.019436243	-0.002673086		
3D5/2			6.864068846	0.008435083	-0.002635841		
4S1/2			3.149309388	0.004767259	-0.001219387		
4P1/2			3.229860523	0.007951279	-0.001273828		
4P3/2			2.972083926	0.005442586	-0.000727621		
4D3/2			2.967682632	0.003690440	-0.000536373		
4D5/2			2.885088681	0.001678726	-0.000535492		
4F5/2			2.621120054	0.000210936	-0.000027781		
4F7/2			2.583276417	0.000075999	-0.000026984		
5S1/2			1.435220725	0.000998191	-0.000257761		
5P1/2			1.361476902	0.001484710	-0.000239113		
5P3/2			1.234204581	0.000975698	-0.000133091		
5D3/2			0.959345290	0.000389744	-0.000057189		
5D5/2			0.919426481	0.000172030	-0.000054967		
6S1/2			0.497585177	0.000101128	-0.000026156		
6P1/2			0.353424093	0.000074675	-0.000012035		
2P1/2 -- (2)	1055.997616	-1982.856946	16.385143339	0.363370623		-0.029105695	0.001592413
2P3/2			14.427717831	0.046641605	-0.000107798		
3S1/2			6.709541105	0.012874252	-0.000912228		
3P1/2			6.901946570	0.029812724	-0.004462266		
3P3/2			6.648135384	0.011033784	-0.000297509		
3D3/2			7.079164140	0.057757444	-0.013752381		
3D5/2			7.056483199	0.001766946	-0.000409061		
4S1/2			3.239224634	0.003231070	-0.000255142		
4P1/2			3.237815522	0.006932706	-0.001137413		
4P3/2			3.033523310	0.002641416	-0.000084074		
4D3/2			2.971553905	0.011668938	-0.002860736		
4D5/2			2.925090501	0.000418249	-0.000091028		
4F5/2			2.621748564	0.000248436	-0.000052142		
4F7/2			2.584726809	0.000013823	-0.000005248		
5S1/2			1.453680123	0.000675814	-0.000054580		
5P1/2			1.363270070	0.001277742	-0.000213290		
5P3/2			1.245075543	0.000471385	-0.000015481		
5D3/2			0.959808231	0.001245812	-0.000306906		
5D5/2			0.923550886	0.000044112	-0.000009493		
6S1/2			0.499448999	0.000068455	-0.000005550		
6P1/2			0.353516430	0.000064148	-0.000010734		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM 6P1 Z=81 A=205 R=1.33712E-04 A.U.							
2P3/2 -- (4)	759.871856	-1594.349888	13.637858005	0.171362169		-0.001710450	0.000221618
3S1/2			6.547132010	0.016079466	-0.001216683		
3P1/2			7.014327236	0.009885933	-0.000453324		
3P3/2			6.346788226	0.020691784	-0.001915822		
3D3/2			7.163892560	0.017181862	-0.001683379		
3D5/2			6.822043292	0.028548601	-0.008113514		
4S1/2			3.199230625	0.003841041	-0.000313503		
4P1/2			3.254020761	0.002316603	-0.000122686		
4P3/2			2.968134940	0.004709956	-0.000482987		
4D3/2			2.986872931	0.003389109	-0.000335183		
4D5/2			2.879173523	0.005509716	-0.001616938		
4F5/2			2.621541222	0.000164155	-0.000016067		
4F7/2			2.582934997	0.000142088	-0.000045908		
5S1/2			1.445340461	0.000795211	-0.000066023		
5P1/2			1.365904931	0.000427801	-0.000023312		
5P3/2			1.233620863	0.000832180	-0.000086969		
5D3/2			0.961406597	0.000360672	-0.000035739		
5D5/2			0.918859240	0.000561586	-0.000165607		
6S1/2			0.498604677	0.000080406	-0.000006696		
6P1/2			0.353646221	0.000021484	-0.000001175		
3S1/2 -- (2)	336.195864	-728.015151	5.072368787	0.010060569		-0.056753673	0.002097762
3P1/2			4.667633945	0.003476666	-0.000051305		
3P3/2			4.441497167	0.005073625	-0.000395411		
3D3/2			5.081854169	0.003169620	-0.000099682		
3D5/2			5.011829726	0.004196535	-0.000121016		
4S1/2			2.761714743	0.001617281	-0.000575250		
4P1/2			2.834865955	0.002170900	-0.000378720		
4P3/2			2.634437076	0.001516402	-0.000185094		
4D3/2			2.647790028	0.000889128	-0.000086657		
4D5/2			2.589899982	0.000864493	-0.000074933		
4F5/2			2.528183068	0.000746476	-0.000104596		
4F7/2			2.496221719	0.000340327	-0.000102125		
5S1/2			1.358601242	0.000337098	-0.000124065		
5P1/2			1.290251607	0.000420700	-0.000075627		
5P3/2			1.175720654	0.000282676	-0.000036876		
5D3/2			0.925753665	0.000101031	-0.000010597		
5D5/2			0.889663472	0.000088322	-0.000008862		
6S1/2			0.489890392	0.000034112	-0.000012612		
6P1/2			0.349858254	0.000021245	-0.000003833		
3P1/2 -- (2)	331.663982	-721.570754	5.382990626	0.019969500		-0.007438594	0.000400902
3P3/2			4.875476536	0.002430485	-0.000017725		
3D3/2			4.971618634	0.007103375	-0.000496674		
3D5/2			5.257858662	0.003140621	-0.000021881		
4S1/2			2.850526590	0.001387585	-0.000169085		
4P1/2			2.788807400	0.002274745	-0.000525420		
4P3/2			2.675516941	0.000745056	-0.000040533		
4D3/2			2.663536476	0.002068312	-0.000312010		
4D5/2			2.618134793	0.000577504	-0.000020239		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81 A=205 R=1.33712E-04 A.U.					
			2.520434079	0.001270102	-0.000279511		
			2.516024708	0.000140539	-0.000029625		
			1.374571716	0.000282114	-0.000036870		
			1.283973997	0.000413334	-0.000100844		
			1.182458558	0.000134574	-0.000008199		
			0.927526287	0.000238095	-0.000038415		
			0.892489258	0.000057639	-0.000002375		
			0.491470227	0.000028436	-0.000003757		
			0.349556335	0.000020709	-0.000005085		
3P3/2 -- (4)	258.306809	-619.956803	4.739503841	0.010102778		-0.000458939	0.000058568
			5.038483677	0.002272114	-0.000015680		
			4.813739800	0.005586472	-0.000112220		
			2.804914875	0.001976521	-0.000247024		
			2.829431500	0.000873238	-0.000064781		
			2.596550502	0.001614832	-0.000231270		
			2.634716232	0.000768044	-0.000071878		
			2.570153246	0.001694452	-0.000255703		
			2.521033192	0.000648789	-0.000065365		
			2.473010149	0.000622072	-0.000184769		
			1.365552838	0.000384100	-0.000050236		
			1.289080938	0.000158554	-0.000013085		
			1.169787142	0.000280875	-0.000042902		
			0.924419125	0.000085724	-0.000008428		
			0.887726311	0.000177216	-0.000029000		
			0.490563988	0.000038462	-0.000005067		
			0.349798443	0.000007944	-0.000000665		
3D3/2 -- (4)	252.712402	-612.038451	5.487782923	0.017132137		-0.000006540	0.000001081
			5.467380670	0.003152883	-0.000000172		
			2.886250914	0.000770047	-0.000019466		
			2.877862181	0.001515652	-0.000107076		
			2.696158642	0.000546045	-0.000013845		
			2.651358054	0.001830555	-0.000174495		
			2.646839329	0.000601662	-0.000008605		
			2.508450691	0.002857316	-0.000706820		
			2.526301678	0.000095212	-0.000011401		
			1.381285200	0.000155889	-0.000005049		
			1.298143419	0.000260461	-0.000019636		
			1.185898553	0.000095675	-0.000002872		
			0.926764823	0.000187399	-0.000019406		
			0.895342895	0.000060800	-0.000001019		
			0.492138379	0.000015708	-0.000000528		
			0.350253967	0.000012959	-0.000000986		
3D5/2 -- (6)	237.386795	-589.229165	5.347212696	0.014357938		-0.000001208	0.000000300
			2.871710547	0.000905944	-0.000019552		
			2.886610438	0.000641955	-0.000009671		
			2.672696919	0.001072953	-0.000045551		
			2.693400387	0.000492328	-0.000009394		
			2.598240952	0.001634269	-0.000111333		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM	6P1	Z=81 A=205 R=1.33712E-04 A.U.					
4F5/2			2.551923427	0.000597075	-0.000044354		
4F7/2			2.483742832	0.001782298	-0.000495410		
5S1/2			1.378374676	0.000179289	-0.000005055		
5P1/2			1.299075464	0.000114150	-0.000002301		
5P3/2			1.182079351	0.000180676	-0.000008532		
5D3/2			0.930492593	0.000051342	-0.000001154		
5D5/2			0.890876744	0.000160218	-0.000011902		
6S1/2			0.491845440	0.000018004	-0.000000529		
6P1/2			0.350296722	0.000005705	-0.000000119		
4S1/2 -- (2)	110.802418	-309.109991	2.288731731	0.000893572		-0.014604247	0.000538716
4P1/2			2.028805332	0.000409810	-0.000022700		
4P3/2			1.942694537	0.000530460	-0.000088323		
4D3/2			2.064614521	0.000388899	-0.000035642		
4D5/2			2.035715440	0.000347719	-0.000039290		
4F5/2			2.050433230	0.000268403	-0.000024078		
4F7/2			2.034748791	0.000262284	-0.000024445		
5S1/2			1.233788081	0.000132403	-0.000057185		
5P1/2			1.186736123	0.000114460	-0.000022531		
5P3/2			1.088797180	0.000075857	-0.000013001		
5D3/2			0.874743980	0.000024026	-0.000002673		
5D5/2			0.842770350	0.000032440	-0.000002640		
6S1/2			0.477869284	0.000013419	-0.000005955		
6P1/2			0.344774484	0.000006010	-0.000001211		
4P1/2 -- (2)	105.888693	-300.467121	2.282676753	0.001633304		-0.001888248	0.000101409
4P3/2			2.072078949	0.000187469	-0.000002554		
4D3/2			1.935528300	0.000912858	-0.000153890		
4D5/2			2.076975337	0.000213772	-0.000006141		
4F5/2			2.008549543	0.000430818	-0.000058493		
4F7/2			2.048525638	0.000186037	-0.000006831		
5S1/2			1.253679362	0.000153318	-0.000022472		
5P1/2			1.165500587	0.000154340	-0.000043988		
5P3/2			1.094797226	0.000045739	-0.000003392		
5D3/2			0.870647684	0.000045889	-0.000006852		
5D5/2			0.844262050	0.000023753	-0.000000849		
6S1/2			0.479576634	0.000014975	-0.000002295		
6P1/2			0.343839266	0.000007682	-0.000002271		
4P3/2 -- (4)	83.595150	-265.018838	2.024535127	0.000826345		-0.000115426	0.000014677
4D3/2			2.007220034	0.000235713	-0.000008546		
4D5/2			1.900210130	0.000523556	-0.000049702		
4F5/2			1.976490133	0.000188946	-0.000009676		
4F7/2			1.936670615	0.000307096	-0.000028088		
5S1/2			1.236199155	0.000224091	-0.000033649		
5P1/2			1.176608136	0.000066043	-0.000005933		
5P3/2			1.071949657	0.000105081	-0.000018373		
5D3/2			0.868908087	0.000019117	-0.000001539		
5D5/2			0.835465673	0.000046458	-0.000003906		
6S1/2			0.477932282	0.000021110	-0.000003278		
6P1/2			0.344262891	0.000003279	-0.000000315		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM 6P1 Z=81 A=205 R=1.33712E-04 A.U.							
4D3/2 -- (4)	75.321691	-249.028512	2.004037997	0.001079023		-0.000001787	0.000000294
4D5/2			1.999463123	0.000199812	-0.000000023		
4F5/2			1.873328382	0.000572693	-0.0000072481		
4F7/2			1.964705962	0.000155981	-0.000001371		
5S1/2			1.238561845	0.000075758	-0.000002723		
5P1/2			1.166093230	0.000161645	-0.000017423		
5P3/2			1.082707884	0.000041929	-0.000001744		
5D3/2			0.858576585	0.000069900	-0.000007640		
5D5/2			0.837620973	0.000020992	-0.000000376		
6S1/2			0.478151724	0.000007300	-0.000000322		
6P1/2			0.343835635	0.000007511	-0.000000836		
4D5/2 -- (6)	70.791529	-240.970519	1.961640300	0.000899813		-0.000000328	0.000000081
4F5/2			1.948840815	0.000155219	-0.000004047		
4F7/2			1.866983732	0.000468735	-0.000046904		
5S1/2			1.232573244	0.000089423	-0.000002664		
5P1/2			1.171325939	0.000050048	-0.000001055		
5P3/2			1.074731492	0.000093812	-0.000007001		
5D3/2			0.866595214	0.000018560	-0.000000445		
5D5/2			0.829122702	0.000059823	-0.000004662		
6S1/2			0.477602885	0.000008390	-0.000000319		
6P1/2			0.344015075	0.000002411	-0.000000062		
4F5/2 -- (6)	56.629456	-212.553692	1.907413456	0.000949866		-0.000000000	0.000000000
4F7/2			1.926230175	0.000150303	-0.000000000		
5S1/2			1.223800871	0.000044669	-0.000000005		
5P1/2			1.154731247	0.000058304	-0.000000047		
5P3/2			1.071899090	0.000027530	-0.000000030		
5D3/2			0.857201194	0.000041094	-0.000001242		
5D5/2			0.831804615	0.000013151	-0.000000086		
6S1/2			0.476912179	0.000004358	-0.000000012		
6P1/2			0.343387069	0.000002761	-0.000000017		
4F7/2 -- (8)	55.123974	-209.463577	1.890251281	0.000871939		-0.000000000	0.000000000
5S1/2			1.220361090	0.000056351	-0.000000010		
5P1/2			1.159680058	0.000037545	-0.000000005		
5P3/2			1.066567741	0.000047480	-0.000000068		
5D3/2			0.861308641	0.000015443	-0.000000036		
5D5/2			0.827217169	0.000035342	-0.000000799		
6S1/2			0.476603248	0.000005190	-0.000000012		
6P1/2			0.343512573	0.000001753	-0.000000003		
5S1/2 -- (2)	28.473732	-127.548113	1.023757329	0.000068162		-0.003073453	0.000113317
5P1/2			0.873943347	0.000053177	-0.000005979		
5P3/2			0.833084137	0.000053433	-0.000013373		
5D3/2			0.754436722	0.000034181	-0.000004558		
5D5/2			0.733722102	0.000016977	-0.000004435		
6S1/2			0.450660625	0.000004997	-0.000002316		
6P1/2			0.333760436	0.000001444	-0.000000311		
5P1/2 -- (2)	24.552434	-117.488452	0.955624890	0.000105814		-0.000354689	0.000019034
5P3/2			0.860294794	0.000011746	-0.000000207		
5D3/2			0.697959772	0.000083787	-0.000019125		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THALLIUM 6P1 Z=81 A=205 R=1.33712E-04 A.U.							
5D5/2			0.730003639	0.000006301	-0.000000665		
6S1/2			0.452050184	0.000008441	-0.000001276		
6P1/2			0.330154609	0.000002660	-0.000000779		
5P3/2 -- (4)	18.928154	-104.291161	0.836686514	0.000051646		-0.000020927	0.000002646
5D3/2			0.719729836	0.000019464	-0.000001593		
5D5/2			0.674663562	0.000033950	-0.000007847		
6S1/2			0.446311462	0.000011586	-0.000001768		
6P1/2			0.331363347	0.000001220	-0.000000109		
5D3/2 -- (4)	11.098702	-78.644420	0.641552357	0.000034139		-0.000000201	0.000000033
5D5/2			0.635076004	0.000006137	-0.000000001		
6S1/2			0.425922144	0.000002514	-0.000000017		
6P1/2			0.318326438	0.000003261	-0.000000249		
5D5/2 -- (6)	10.089324	-75.230506	0.618132638	0.000027101		-0.000000035	0.000000009
6S1/2			0.421571926	0.000003623	-0.000000009		
6P1/2			0.321479283	0.000001036	-0.000000008		
6S1/2 -- (2)	3.426150	-41.448506	0.359942044	0.000002394		-0.000311658	0.000011490
6P1/2			0.262707893	0.000002489	-0.000000372		
6P1/2 -- (1)	1.547711	-28.989621	0.000000000	0.000000000		-0.000017856	0.000000958
ETOT	-20255.07121	23460.98519	-51211.16296	7475.42879	26.508745024	-2.814086784	-4.182719612
LEAD 6P2 Z=82 A=208 R=1.34361E-04 A.U.							
1S1/2 -- (2)	4563.139976	-8293.374729	59.404208388	8.128540773		-1.836252617	0.074353508
2S1/2			18.529076817	0.438950669	-0.052912548		
2P1/2			22.704259113	0.909250304	-0.120534573		
2P3/2			18.961539453	0.407072040	-0.117665959		
3S1/2			7.740967093	0.095660705	-0.012332973		
3P1/2			8.568271957	0.182358701	-0.023910925		
3P3/2			7.541554918	0.088868770	-0.026485161		
3D3/2			7.671084659	0.004022157	-0.000471908		
3D5/2			7.379387086	0.001596569	-0.000511909		
4S1/2			3.532311258	0.024454601	-0.003198524		
4P1/2			3.662261115	0.044137610	-0.005773707		
4P3/2			3.276413854	0.021468560	-0.006441298		
4D3/2			3.136644369	0.001058997	-0.000124758		
4D5/2			3.033506143	0.000418417	-0.000135387		
4F5/2			2.695132542	0.000002771	-0.000000298		
4F7/2			2.655587450	0.000001055	-0.000000347		
5S1/2			1.544027757	0.005245987	-0.000688478		
5P1/2			1.475356930	0.008435573	-0.001102892		
5P3/2			1.319262718	0.003961643	-0.001190367		
5D3/2			1.029277351	0.000128962	-0.000015204		
5D5/2			0.987108281	0.000049249	-0.000015961		
6S1/2			0.541157271	0.000594103	-0.000078018		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
2S1/2 --	6P1/2 (2)	1097.776125	-2051.540142	0.404761673 13.557441123	0.000543570 0.167251094	-0.000071062	
	2P1/2			13.475686243	0.051108457	-0.000079089	0.010182571
	2P3/2			12.487204016	0.074673835	-0.001921632	
	3S1/2			6.427762146	0.019895487	-0.004831387	
	3P1/2			7.034386404	0.033611191	-0.005224727	
	3P3/2			6.480867080	0.022986744	-0.002737786	
	3D3/2			7.188306729	0.020334130	-0.002794809	
	3D5/2			6.970401490	0.008808676	-0.002755256	
	4S1/2			3.210690342	0.005042532	-0.001288899	
	4P1/2			3.296475133	0.008434336	-0.001349634	
	4P3/2			3.027270684	0.005703510	-0.000759041	
	4D3/2			3.029092511	0.003902535	-0.000566902	
	4D5/2			2.943140860	0.001773107	-0.000566316	
	4F5/2			2.691995763	0.000227707	-0.000029972	
	4F7/2			2.652776620	0.000081993	-0.000029119	
	5S1/2			1.475629663	0.001079242	-0.000278529	
	5P1/2			1.405639977	0.001621610	-0.000260865	
	5P3/2			1.273537318	0.001056603	-0.000143541	
	5D3/2			1.016534452	0.000450291	-0.000066054	
	5D5/2			0.976764811	0.000199992	-0.000063988	
	6S1/2			0.533423185	0.000122171	-0.000031583	
	6P1/2			0.400271077	0.000104583	-0.000016837	
2P1/2 --	(2)	1096.290127	-2049.797902	16.691850979	0.381835510	-0.032262300	0.001803760
	2P3/2			14.658741896	0.048449805	-0.000118849	
	3S1/2			6.830949063	0.013548273	-0.000957148	
	3P1/2			7.029266467	0.031414212	-0.004695244	
	3P3/2			6.755905929	0.011520008	-0.000310092	
	3D3/2			7.195706565	0.060357898	-0.014371165	
	3D5/2			7.165444080	0.001836774	-0.000426760	
	4S1/2			3.303449526	0.003418181	-0.000269222	
	4P1/2			3.304846909	0.007349745	-0.001204410	
	4P3/2			3.090526632	0.002777945	-0.000088292	
	4D3/2			3.033273668	0.012330568	-0.003023041	
	4D5/2			2.984170777	0.000439812	-0.000096081	
	4F5/2			2.692661259	0.000267636	-0.000056169	
	4F7/2			2.654296373	0.000014873	-0.000005651	
	5S1/2			1.495092965	0.000730823	-0.000058887	
	5P1/2			1.407580667	0.001394630	-0.000232585	
	5P3/2			1.285099195	0.000512218	-0.000016806	
	5D3/2			1.017079514	0.001438766	-0.000354496	
	5D5/2			0.981422104	0.000051093	-0.000011034	
	6S1/2			0.535618666	0.000082714	-0.000006692	
	6P1/2			0.400399375	0.000089769	-0.000015010	
2P3/2 --	(4)	780.992627	-1636.768487	13.828173051	0.178254364	-0.001842537	0.000244995
	3S1/2			6.659602327	0.016890408	-0.001287868	
	3P1/2			7.138073777	0.010373752	-0.000477453	
	3P3/2			6.443945640	0.021597319	-0.002002299	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
			7.277808278	0.017965907	-0.001757314		
			6.924629832	0.029819240	-0.008475106		
			3.261034036	0.004051361	-0.000332880		
			3.320043012	0.002444401	-0.000129909		
			3.022308465	0.004948141	-0.000508213		
			3.048190383	0.003576910	-0.000353137		
			2.936468305	0.005812752	-0.001706293		
			2.692403780	0.000178417	-0.000017449		
			2.652381264	0.000154343	-0.000349882		
			1.486052220	0.000857094	-0.000071636		
			1.410085000	0.000464705	-0.000025421		
			1.272753505	0.000903042	-0.000094550		
			1.018776974	0.000415881	-0.000041139		
			0.976057619	0.000651896	-0.000192314		
			0.534595977	0.000096821	-0.000308118		
			0.400556933	0.000029921	-0.000001644		
3S1/2 -- (2)	349.349735	-752.308557	5.160997821	0.010601728		-0.061116805	0.002311669
			4.751342653	0.003657556	-0.000052685		
			4.514511040	0.005322499	-0.000427458		
			5.167579923	0.003329488	-0.000105597		
			5.094361697	0.004398642	-0.000128722		
			2.813868220	0.001712874	-0.000608853		
			2.891070203	0.002312010	-0.000403027		
			2.681967983	0.001583866	-0.000193636		
			2.700982027	0.000940679	-0.000091669		
			2.640909137	0.000914832	-0.000079028		
			2.595074029	0.000803598	-0.000112636		
			2.562088919	0.000366559	-0.000110005		
			1.395474246	0.000364910	-0.000134238		
			1.330386619	0.000461338	-0.000082886		
			1.211764704	0.000305336	-0.000039902		
			0.978894142	0.000116973	-0.000012287		
			0.943237968	0.000102864	-0.000010321		
			0.524431921	0.000041257	-0.000015249		
			0.395441505	0.000029880	-0.000005388		
3P1/2 -- (2)	344.725864	-745.774761	5.480836089	0.021059190		-0.008273573	0.000455477
			4.956884100	0.002526723	-0.000019693		
			5.056587768	0.007479594	-0.000530597		
			5.345906430	0.003290018	-0.000023454		
			2.905149855	0.001466728	-0.000178517		
			2.844107902	0.002414406	-0.000557405		
			2.724341515	0.000780683	-0.000042734		
			2.717407262	0.002180509	-0.000328352		
			2.670105754	0.000612247	-0.000021392		
			2.587200428	0.001367398	-0.000301045		
			2.582845407	0.000151364	-0.000031916		
			1.412240372	0.000304812	-0.000039817		
			1.323832252	0.000451610	-0.000110176		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
			1.218324172	0.000196246	-0.000009301		
			0.984095122	0.000059268	-0.000001343		
			0.944522235	0.000185972	-0.000013892		
			0.526686817	0.000021658	-0.000000642		
			0.396019272	0.000007946	-0.000000168		
4S1/2 -- (2)	115.626446	-319.812355	2.332657444	0.000948475		-0.015811829	0.000596829
			2.068888986	0.000432166	-0.000023512		
			1.979056511	0.000564023	-0.000095285		
			2.105751492	0.000412145	-0.000037736		
			2.075770851	0.000368343	-0.000041726		
			2.101000807	0.000286232	-0.000025457		
			2.084997116	0.000281565	-0.000025880		
			1.265732182	0.000143842	-0.000062229		
			1.221759877	0.000126758	-0.000024949		
			1.120544581	0.000082370	-0.000014307		
			0.922085638	0.000027879	-0.000003117		
			0.890685462	0.000037892	-0.000003096		
			0.510493476	0.000016285	-0.000007243		
			0.388609682	0.000008548	-0.000001724		
4P1/2 -- (2)	110.625874	-311.080129	2.328739209	0.001737232		-0.002114000	0.000115959
			2.111671860	0.000196396	-0.000002870		
			1.975017232	0.000971027	-0.000164050		
			2.118741332	0.000226245	-0.000006572		
			2.058911267	0.000459955	-0.000061928		
			2.100009164	0.000200277	-0.000007254		
			1.286575588	0.000165802	-0.000024341		
			1.199697872	0.000169243	-0.000048403		
			1.126982839	0.000049595	-0.000003735		
			0.917650066	0.000053300	-0.000008009		
			0.892415102	0.000027733	-0.000001005		
			0.512482484	0.000018073	-0.000002779		
			0.387374204	0.000010795	-0.000003207		
4P3/2 -- (4)	86.795811	-273.382661	2.061197229	0.000873160		-0.000125882	0.000016418
			2.046051484	0.000248191	-0.000008835		
			1.936622445	0.000553170	-0.000051845		
			2.023492314	0.000200576	-0.000010073		
			1.982877787	0.000328110	-0.000029278		
			1.267948960	0.000244357	-0.000036816		
			1.210859030	0.000072670	-0.000006563		
			1.102756002	0.000114847	-0.000020200		
			0.915464390	0.000022400	-0.000001830		
			0.882433018	0.000054704	-0.000004665		
			0.510528870	0.000025632	-0.000003999		
			0.387904675	0.000004619	-0.000000448		
4D3/2 -- (4)	78.461272	-257.370141	2.045282885	0.001146743		-0.000002022	0.000000342
			2.040126147	0.000211965	-0.000000026		
			1.920390069	0.000607985	-0.000075507		
			2.013878971	0.000167965	-0.000001437		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
			1.270996982	0.000082176	-0.000002988		
			1.200405601	0.000177202	-0.000019212		
			1.114394995	0.000045772	-0.000001914		
			0.904288276	0.000081156	-0.000008996		
			0.885010498	0.000024540	-0.000000448		
			0.510841394	0.000008832	-0.000000396		
			0.387369805	0.000010511	-0.000001179		
4D5/2 -- (6)	73.656056	-248.868497	2.001092378	0.000955081		-0.000000369	0.000000094
			1.996932825	0.000165174	-0.000004193		
			1.913323786	0.000499275	-0.000048656		
			1.264674159	0.000096858	-0.000002925		
			1.205713496	0.000054697	-0.000001168		
			1.106002042	0.000102320	-0.000007667		
			0.913066666	0.000021545	-0.000000526		
			0.875515534	0.000069818	-0.000005526		
			0.510194891	0.000010130	-0.000000393		
			0.387596064	0.000003371	-0.000000089		
4F5/2 -- (6)	59.612807	-221.001263	1.963551858	0.001030266		-0.000000001	0.000000000
			1.983004331	0.000163351	-0.000000000		
			1.258133776	0.000048679	-0.000000002		
			1.190815532	0.000064059	-0.000000075		
			1.104779640	0.000030286	-0.000000042		
			0.903920803	0.000047861	-0.000001505		
			0.879419651	0.000015464	-0.000000106		
			0.509642788	0.000005302	-0.000000017		
			0.386892721	0.000003881	-0.000000027		
4F7/2 -- (8)	58.015113	-217.758507	1.945863866	0.000945707		-0.000000000	0.000000000
			1.254611026	0.000061209	-0.000000005		
			1.195728899	0.000041123	-0.000000008		
			1.099361560	0.000051991	-0.000000095		
			0.908241103	0.000017955	-0.000000046		
			0.874468155	0.000041340	-0.000000973		
			0.509288495	0.000006295	-0.000000017		
			0.387050169	0.000002459	-0.000000005		
5S1/2 -- (2)	30.349956	-133.086821	1.051696207	0.000074443		-0.003401783	0.000128339
			0.899577341	0.000057235	-0.000006351		
			0.857483183	0.000058935	-0.000014766		
			0.790899112	0.000039000	-0.000005190		
			0.771036331	0.000019672	-0.000000509		
			0.479600709	0.000006146	-0.000002878		
			0.374160875	0.000002071	-0.000000453		
5P1/2 -- (2)	26.371326	-123.052765	0.985477103	0.000116829		-0.000408964	0.000022414
			0.886948343	0.000012787	-0.000000245		
			0.731434460	0.000095640	-0.000021792		
			0.767864914	0.000007408	-0.000000769		
			0.481353866	0.000010279	-0.000001565		
			0.369567152	0.000003790	-0.000001137		
5P3/2 -- (4)	20.280696	-109.053067	0.862400512	0.000056907		-0.000023473	0.000003059

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LEAD	6P2	Z=82 A=208 R=1.34361E-04 A.U.					
503/2			0.754327523	0.000021928	-0.000001766		
505/2			0.708149149	0.000038683	-0.000008810		
6S1/2			0.474868607	0.000014275	-0.000002196		
6P1/2			0.371048475	0.000001757	-0.000000160		
503/2 -- (4)	12.538314	-84.420923	0.680253449	0.000040687		-0.000000248	0.000000042
505/2			0.674472947	0.000007365	-0.000000001		
6S1/2			0.455302845	0.000003218	-0.000000033		
6P1/2			0.356600811	0.000004847	-0.000000412		
505/2 -- (6)	11.458849	-80.957142	0.657483237	0.000032563		-0.000000044	0.000000011
6S1/2			0.451026564	0.000004536	-0.000000021		
6P1/2			0.360081855	0.000001466	-0.000000014		
6S1/2 -- (2)	4.076357	-45.108486	0.385774192	0.000002982		-0.000385455	0.000014541
6P1/2			0.291013982	0.000003291	-0.000000486		
6P1/2 -- (2)	2.108930	-33.324210	0.285582021	0.000002429		-0.000026402	0.000001447
ETOT	-20893.16069	24306.19489	-52909.99317	7690.16001	27.700314762	-2.940132541	-4.463901911
							0.181300276
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.					
1S1/2 -- (2)	4720.822485	-8554.113742	60.417745467	8.462496990		-1.954802461	0.081039261
2S1/2			18.865263165	0.458598942	-0.055388776		
2P1/2			23.151986500	0.949630484	-0.125160537		
2P3/2			19.229457378	0.422608139	-0.122150480		
3S1/2			7.884156073	0.100146246	-0.012935296		
3P1/2			8.737149766	0.190712114	-0.024842123		
3P3/2			7.660445996	0.092697854	-0.027624643		
303/2			7.794008870	0.004189417	-0.000489308		
305/2			7.489962413	0.001661055	-0.000532502		
4S1/2			3.603734943	0.025731596	-0.003371873		
4P1/2			3.741769993	0.046430042	-0.006032576		
4P3/2			3.337687796	0.022550694	-0.006765726		
403/2			3.201236480	0.001115527	-0.000130820		
405/2			3.093792601	0.000440454	-0.000142502		
4F5/2			2.765572135	0.000002992	-0.000000321		
4F7/2			2.724548526	0.000001140	-0.000000375		
5S1/2			1.588427999	0.005638206	-0.000741371		
5P1/2			1.524372153	0.009124763	-0.001184886		
5P3/2			1.361511114	0.004294048	-0.001290231		
503/2			1.086390705	0.000147166	-0.000017271		
505/2			1.043779605	0.000056486	-0.000018306		
6S1/2			0.579217123	0.000708969	-0.000093284		
6P1/2			0.454348418	0.000730629	-0.000094866		
6P3/2			0.378631613	0.000278690	-0.000083757		
2S1/2 -- (2)	1139.569175	-2120.496887	13.793831377	0.175611994		-0.286517134	0.011181478
2P1/2			13.720649198	0.053664599	-0.000080831		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.					
			12.682617462	0.077856249	-0.002090869		
			6.540188650	0.020929646	-0.005077918		
			7.162807422	0.035428781	-0.005500937		
			6.583099949	0.023884986	-0.002827646		
			7.304347650	0.021260628	-0.002920257		
			7.077008194	0.009192805	-0.002878267		
			3.272821833	0.005331537	-0.001361752		
			3.363952552	0.008942299	-0.001429161		
			3.082884342	0.005972517	-0.000791071		
			3.090914600	0.004123887	-0.000598719		
			3.001494598	0.001871345	-0.000598468		
			2.762295203	0.000245140	-0.000032247		
			2.721618847	0.000088213	-0.000031336		
			1.516547079	0.001165515	-0.000300604		
			1.450318806	0.001768010	-0.000284081		
			1.313259633	0.001141951	-0.000154476		
			1.072238966	0.000514799	-0.000075493		
			1.032276453	0.000229731	-0.000073605		
			0.570193007	0.000146490	-0.000037849		
			0.448421347	0.000141696	-0.000022786		
			0.375502567	0.000074156	-0.000010062		
2P1/2 -- (2)	1138.050174	-2118.758080	17.003679968	0.401133366		-0.035748684	0.002041385
			14.891703007	0.050300108	-0.000130906		
			6.953886600	0.014252731	-0.001003831		
			7.158199896	0.033090263	-0.004938173		
			6.864318929	0.012020427	-0.000323018		
			7.312859597	0.063033522	-0.015007785		
			7.274623465	0.001907831	-0.000444908		
			3.368511539	0.003614757	-0.000283937		
			3.372755326	0.007788643	-0.001274689		
			3.147999190	0.002919697	-0.000092660		
			3.095418183	0.013019439	-0.003191994		
			3.043554375	0.000462037	-0.000101328		
			2.762997986	0.000287520	-0.000060339		
			2.723207125	0.000015957	-0.000006066		
			1.537052714	0.000789411	-0.000063455		
			1.452414838	0.001519660	-0.000253173		
			1.325538829	0.000555546	-0.000018209		
			1.072872819	0.001644081	-0.000040514		
			1.037473875	0.000058462	-0.000012671		
			0.572760819	0.000099200	-0.000008008		
			0.448593747	0.000121540	-0.000020305		
			0.376298367	0.000036051	-0.000001187		
2P3/2 -- (4)	802.450210	-1679.810733	14.018948763	0.185331957		-0.001983092	0.000270514
			6.773151971	0.017736367	-0.001362851		
			7.263042208	0.010881291	-0.000502625		
			6.541409033	0.022529862	-0.002091441		
			7.392099467	0.018774310	-0.001833313		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.					
			7.027322615	0.031126750	-0.008847239		
			3.323540309	0.004271450	-0.000353325		
			3.386830062	0.002577950	-0.000137476		
			3.076839322	0.005195259	-0.000534417		
			3.109872035	0.003772109	-0.000371744		
			2.994016093	0.006127620	-0.001799162		
			2.762685499	0.000193422	-0.000018901		
			2.721164898	0.000167219	-0.000054060		
			1.527262061	0.000922707	-0.000077637		
			1.454753112	0.000503897	-0.000027668		
			1.312251318	0.000978126	-0.000102599		
			1.074648672	0.000474471	-0.000046852		
			1.031410695	0.000747705	-0.000220663		
			0.571531164	0.000115715	-0.000009768		
			0.448775622	0.000040313	-0.000002224		
			0.375438471	0.000063375	-0.000006667		
3S1/2 -- (2)	362.957256	-777.268050	5.250565443	0.011167621		-0.065805427	0.002545668
			4.835990275	0.003846586	-0.000054088		
			4.588031771	0.005581749	-0.000462093		
			5.253919114	0.003495940	-0.000111898		
			5.177389101	0.004607923	-0.000136952		
			2.866593798	0.001813286	-0.000644091		
			2.947915599	0.002460821	-0.000428626		
			2.729820974	0.001652785	-0.000202427		
			2.754507324	0.000994164	-0.000096857		
			2.692184643	0.000967296	-0.000083246		
			2.661432352	0.000863165	-0.000121023		
			2.627353763	0.000393875	-0.000118222		
			1.432763706	0.000394535	-0.000145061		
			1.370919425	0.000504955	-0.000090667		
			1.248107243	0.000329094	-0.000043086		
			1.030490340	0.000133965	-0.000014089		
			0.994946406	0.000118369	-0.000011871		
			0.559762004	0.000049523	-0.000018298		
			0.442090974	0.000040650	-0.000007328		
			0.371292225	0.000021477	-0.000002836		
3P1/2 -- (2)	358.238757	-770.642619	5.579796572	0.022199431		-0.009198164	0.000516980
			5.038855499	0.002624920	-0.000021856		
			5.142142983	0.007873090	-0.000566986		
			5.434492622	0.003444372	-0.000025143		
			2.960400447	0.001549739	-0.000188387		
			2.900035235	0.002561388	-0.000590992		
			2.773517987	0.000817360	-0.000045031		
			2.771622183	0.002296047	-0.000345074		
			2.722358191	0.000648600	-0.000022588		
			2.653449153	0.001468845	-0.000323509		
			2.649060948	0.000162612	-0.000034304		
			1.450349656	0.000328950	-0.000042946		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83	A=209	R=1.34576E-04	A.U.		
	5P1/2		1.364085385	0.000492568	-0.000120149		
	5P3/2		1.255734773	0.000157590	-0.000009734		
	5D3/2		1.032771210	0.000313777	-0.000050604		
	5D5/2		0.998558311	0.000077474	-0.000003193		
	6S1/2		0.561915927	0.000041119	-0.000005432		
	6P1/2		0.441570931	0.000039305	-0.000009658		
	6P3/2		0.371781522	0.000010242	-0.000000642		
3P3/2 --	(4)	274.744764	-655.561344	4.885531200	0.011052565	-0.000537442	0.000072149
	3D3/2		5.197080767	0.002462387	-0.000016391		
	3D5/2		4.962102667	0.006101320	-0.000120927		
	4S1/2		2.909658811	0.002226162	-0.000280902		
	4P1/2		2.939664418	0.000982623	-0.000073399		
	4P3/2		2.688585891	0.001791761	-0.000257383		
	4D3/2		2.738714022	0.000867417	-0.000081408		
	4D5/2		2.669515008	0.001899843	-0.000288336		
	4F5/2		2.652389644	0.000749300	-0.000075471		
	4F7/2		2.600909148	0.000719604	-0.000213480		
	5S1/2		1.439887139	0.000450035	-0.000059430		
	5P1/2		1.369143303	0.000188512	-0.000015690		
	5P3/2		1.241208748	0.000331978	-0.000050922		
	5D3/2		1.028582833	0.000114577	-0.000011309		
	5D5/2		0.992281669	0.000238022	-0.000039290		
	6S1/2		0.560612662	0.000055828	-0.000007431		
	6P1/2		0.441947109	0.000015040	-0.000001271		
	6P3/2		0.370852255	0.000021460	-0.000003319		
3D3/2 --	(4)	269.039320	-647.542416	5.665469985	0.018784002	-0.000008169	0.000001422
	3D5/2		5.639834882	0.003446028	-0.000000211		
	4S1/2		2.995606216	0.000857772	-0.000021828		
	4P1/2		2.991448604	0.001700152	-0.000121544		
	4P3/2		2.793282066	0.000605415	-0.000015396		
	4D3/2		2.757156449	0.002046174	-0.000196335		
	4D5/2		2.750903555	0.000671996	-0.000009669		
	4F5/2		2.639464570	0.003309137	-0.000818912		
	4F7/2		2.659501988	0.000110859	-0.000013226		
	5S1/2		1.457212598	0.000181114	-0.000005929		
	5P1/2		1.379390772	0.000308417	-0.000023542		
	5P3/2		1.259225332	0.000113046	-0.000003419		
	5D3/2		1.031643372	0.000247191	-0.000025846		
	5D5/2		1.001950620	0.000081280	-0.000001380		
	6S1/2		0.562761135	0.000022628	-0.000000772		
	6P1/2		0.442767651	0.000024412	-0.000001884		
	6P3/2		0.372005673	0.000007316	-0.000000227		
3D5/2 --	(6)	251.911294	-622.135702	5.511482307	0.015687227	-0.000001485	0.000000389
	4S1/2		2.979532042	0.001007175	-0.000021923		
	4P1/2		2.999673635	0.000715719	-0.000010869		
	4P3/2		2.768082944	0.001187051	-0.000050613		
	4D3/2		2.800498294	0.000549558	-0.000010585		
	4D5/2		2.699177116	0.001820648	-0.000124965		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.					
			4F5/2	2.686367370	0.000692194	-0.000051330	
			4F7/2	2.612864903	0.002064305	-0.000573886	
			5S1/2	1.453855969	0.000207746	-0.000005936	
			5P1/2	1.380225514	0.000134548	-0.000002753	
			5P3/2	1.254852989	0.000212756	-0.000010121	
			5D3/2	1.036132019	0.000067694	-0.000001546	
			5D5/2	0.996278736	0.000213288	-0.000016019	
			6S1/2	0.562342251	0.000025856	-0.000000772	
			6P1/2	0.442826344	0.000010705	-0.000000228	
			6P3/2	0.371725441	0.000013692	-0.000000662	
4S1/2 --	(2)	120.632384	-330.809207	2.377066544	0.001006289	-0.017116020	0.000660738
			4P1/2	2.109426054	0.000455580	-0.000024340	
			4P3/2	2.015738626	0.000599597	-0.000102798	
			4D3/2	2.147206911	0.000436582	-0.000039949	
			4D5/2	2.116108385	0.000389881	-0.000044308	
			4F5/2	2.151330795	0.000304811	-0.000026886	
			4F7/2	2.134966117	0.000301691	-0.000027370	
			5S1/2	1.298008635	0.000156071	-0.000067627	
			5P1/2	1.257084589	0.000140090	-0.000027568	
			5P3/2	1.152512833	0.000089246	-0.000015716	
			5D3/2	0.967858133	0.000032015	-0.000003597	
			5D5/2	0.936723221	0.000043726	-0.000003589	
			6S1/2	0.543715654	0.000019614	-0.000008741	
			6P1/2	0.433205774	0.000011758	-0.000002374	
			6P3/2	0.365240327	0.000005969	-0.000001065	
4P1/2 --	(2)	115.543237	-321.986446	2.375320565	0.001846818	-0.002365504	0.000132457
			4P3/2	2.151602715	0.000205603	-0.000003221	
			4D3/2	2.014826474	0.001032530	-0.000174876	
			4D5/2	2.160806543	0.000239210	-0.000007033	
			4F5/2	2.109682418	0.000490376	-0.000065501	
			4F7/2	2.151239965	0.000215162	-0.000007694	
			5S1/2	1.319828148	0.000179087	-0.000026331	
			5P1/2	1.234190017	0.000185250	-0.000053155	
			5P3/2	1.159407650	0.000053662	-0.000004105	
			5D3/2	0.963100549	0.000061251	-0.000009265	
			5D5/2	0.938703814	0.000031988	-0.000001175	
			6S1/2	0.546015869	0.000021649	-0.000003339	
			6P1/2	0.431626122	0.000014673	-0.000004379	
			6P3/2	0.365635691	0.000003533	-0.000000291	
4P3/2 --	(4)	90.081233	-281.911532	2.098074326	0.000922032	-0.000137153	0.000018341
			4D3/2	2.085089657	0.000261162	-0.000009127	
			4D5/2	1.973209581	0.000584038	-0.000054057	
			4F5/2	2.070157396	0.000212610	-0.000010472	
			4F7/2	2.028728730	0.000349933	-0.000030476	
			5S1/2	1.299995478	0.000266173	-0.000040235	
			5P1/2	1.245363363	0.000079829	-0.000007245	
			5P3/2	1.133748522	0.000125284	-0.000022162	
			5D3/2	0.960418805	0.000025971	-0.000002151	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BISMUTH	6P3	Z=83 A=209 R=1.34576E-04 A.U.					
4D3/2 -- (4)	81.684701	-265.875328	0.927499651 0.543711340 0.432265258 0.364095035 2.086741628	0.000063635 0.000030889 0.000006294 0.000008026 0.001217615	-0.000055503 -0.000004840 -0.000000616 -0.000001486	-0.000002284	0.000000396
4D5/2			2.080973531	0.000224642	-0.000000029		
4F5/2			1.967213445	0.000644561	-0.000078568		
4F7/2			2.062731440	0.000180479	-0.000001505		
5S1/2			1.303752849	0.000089019	-0.000003273		
5P1/2			1.234990230	0.000193921	-0.000021146		
5P3/2			1.146296941	0.000049869	-0.000002097		
5D3/2			3.948444881	0.000093227	-0.000010473		
5D5/2			0.930529923	0.000028343	-0.000000526		
6S1/2			0.544135208	0.000010603	-0.000000483		
6P1/2			0.431618606	0.000014229	-0.000001608		
6P3/2			0.364807652	0.000003160	-0.000000144		
4D5/2 -- (6)	76.591059	-256.910175	2.040699581	0.001012813	-0.000000414	0.000000108	
4F5/2			2.044716565	0.000175493	-0.000004332		
4F7/2			1.959355157	0.000530956	-0.000050408		
5S1/2			1.297080605	0.000104778	-0.000003205		
5P1/2			1.240365674	0.000059668	-0.000001290		
5P3/2			1.137473585	0.000111387	-0.000008379		
5D3/2			0.957962154	0.000024744	-0.000000615		
5D5/2			0.920036683	0.000080510	-0.000006467		
6S1/2			0.543378941	0.000012138	-0.000000479		
6P1/2			0.431893926	0.000004559	-0.000000124		
6P3/2			0.364290207	0.000006836	-0.000000532		
4F5/2 -- (6)	62.651753	-229.542908	2.019114662	0.001114345	-0.000000001	0.000000000	
4F7/2			2.039159424	0.000177004	-0.000000001		
5S1/2			1.292680740	0.000052949	-0.000000000		
5P1/2			1.227103965	0.000070211	-0.000000110		
5P3/2			1.137823802	0.000033230	-0.000000055		
5D3/2			0.949161227	0.000055111	-0.000001791		
5D5/2			0.925246624	0.000017953	-0.000000128		
6S1/2			0.542999815	0.000006396	-0.000000023		
6P1/2			0.431142563	0.000005275	-0.000000041		
6P3/2			0.364319103	0.000002110	-0.000000009		
4F7/2 -- (8)	60.956472	-226.137884	2.000835687	0.001022772	-0.000000000	0.000000000	
5S1/2			1.289060459	0.000066368	-0.000000001		
5P1/2			1.231983722	0.000044940	-0.000000012		
5P3/2			1.132301949	0.000056798	-0.000000127		
5D3/2			0.953680995	0.000020651	-0.000000057		
5D5/2			0.919934811	0.000047755	-0.000001164		
6S1/2			0.542594723	0.000007574	-0.000000023		
6P1/2			0.431333450	0.000003335	-0.000000008		
6P3/2			0.364025147	0.000003451	-0.000000021		
5S1/2 -- (2)	32.317638	-138.792257	1.079949764	0.000081195	-0.003761623	0.000145137	
5P1/2			0.925474059	0.000061519	-0.000006736		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BISMUTH 6P3 Z=83 A=209 R=1.34576E-04 A.U.								
			0.882115163	0.000064926	-0.000016290			
			0.826113474	0.000044094	-0.000005855			
			0.806821877	0.000022548	-0.000005800			
			0.508869983	0.000007501	-0.000003547			
			0.414845274	0.000002883	-0.000000639			
			0.352506435	0.000002070	-0.000000624			
5P1/2 -- (2)	28.282653	-128.783229	1.015611125	0.000128735		-0.000470703	0.000026334	
			0.913832654	0.000013892	-0.000000289			
			0.763923961	0.000108259	-0.000024625			
			0.804286767	0.000008604	-0.000000881			
			0.511029594	0.000012420	-0.000001904			
			0.409172730	0.000005222	-0.000001602			
			0.352679653	0.000001209	-0.000000097			
5P3/2 -- (4)	21.695047	-113.938755	0.888308288	0.000062576		-0.000026395	0.000003527	
			0.787819368	0.000024494	-0.000001941			
			0.740372840	0.000043655	-0.000009794			
			0.503739652	0.000017452	-0.000002706			
			0.410927033	0.000002446	-0.000000228			
			0.348592347	0.000002854	-0.000000517			
5D3/2 -- (4)	14.031013	-90.193271	0.717524788	0.000047828		-0.000000304	0.000000053	
			0.712261037	0.000008700	-0.000000001			
			0.484836272	0.000004064	-0.000000056			
			0.395110539	0.000006911	-0.000000638			
			0.344128862	0.000001282	-0.000000057			
5D5/2 -- (6)	12.875022	-86.649813	0.695099694	0.000038515		-0.000000054	0.000000014	
			0.480544700	0.000005608	-0.000000040			
			0.398892457	0.000002007	-0.000000023			
			0.340963066	0.000003258	-0.000000243			
6S1/2 -- (2)	4.813185	-48.949452	0.411944173	0.000003680		-0.000473272	0.000018259	
			0.319507690	0.000004233	-0.000000622			
			0.288766117	0.000002773	-0.000000788			
6P1/2 -- (2)	2.785543	-37.892116	0.320798562	0.000003444		-0.0000037766	0.000002113	
			0.276339276	0.000000338	-0.000000005			
6P3/2 -- (1)	1.767789	-31.487032	0.000000000	0.000000000		-0.000001716	0.000000229	
ETOT	-21544.33803	25176.52447	-54648.33938	7906.17988	28.932571015	-3.070268512	-4.763386308	0.198088522
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.								
1S1/2 -- (2)	4883.641361	-8821.953358	61.446496075	8.807059708		-2.080623847	0.088266892	
			19.206792728	0.478968504	-0.057961742			
			23.608490106	0.991446198	-0.129896497			
			19.498437202	0.438510349	-0.126740057			
			8.029278181	0.104798634	-0.013561316			
			8.908693444	0.199352402	-0.025792034			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
			7.779869760	0.096637841	-0.028796547		
			7.917386368	0.004359984	-0.000506876		
			7.600623898	0.001726699	-0.000553463		
			3.676151639	0.027062806	-0.003552939		
			3.822509809	0.048814003	-0.006298219		
			3.399433461	0.023673274	-0.007102159		
			3.266240027	0.001173879	-0.000137022		
			3.154356448	0.000463184	-0.000149840		
			2.835520183	0.000003221	-0.000000343		
			2.792944964	0.000001229	-0.000000405		
			1.633434692	0.006052451	-0.000797355		
			1.574019132	0.009852310	-0.001270399		
			1.404070977	0.004645233	-0.001395715		
			1.141609552	0.000166198	-0.000019414		
			1.098156467	0.000064033	-0.000020750		
			0.615171246	0.000829324	-0.000109331		
			0.497073865	0.000918865	-0.000118470		
			0.417660631	0.000360206	-0.000108254		
2S1/2 -- (2)	1182.391593	-2191.544403	14.033572584	0.184343517	-0.307553271	0.012271250	
			13.969517458	0.056335160	-0.000082597		
			12.879654754	0.081145773	-0.002274494		
			6.653906426	0.022009800	-0.005334887		
			7.292868517	0.037329639	-0.005789179		
			6.685872889	0.024800645	-0.002917756		
			7.420956065	0.022216090	-0.003049454		
			7.183873864	0.009587487	-0.003004889		
			3.335709685	0.005634867	-0.001438081		
			3.432302881	0.009476265	-0.001512590		
			3.138915333	0.006249607	-0.000823707		
			3.153140821	0.004354768	-0.000631860		
			3.060144537	0.001973533	-0.000631984		
			2.832104931	0.000263230	-0.000034603		
			2.789898862	0.000094657	-0.000033633		
			1.557956553	0.001257249	-0.000324043		
			1.495465563	0.001924275	-0.000308810		
			1.353237752	0.001231611	-0.000165868		
			1.126048805	0.000582655	-0.000085412		
			1.085507767	0.000260891	-0.000083707		
			0.604846158	0.000172190	-0.000044463		
			0.489750725	0.000179639	-0.000028854		
			0.413722295	0.000095563	-0.000012913		
2P1/2 -- (2)	1181.349103	-2189.822001	17.320856968	0.421305025	-0.039598690	0.002308413	
			15.126661438	0.052192670	-0.000144051		
			7.078390764	0.014988893	-0.001052326		
			7.288793879	0.034844335	-0.005191459		
			6.973375465	0.012535144	-0.000336287		
			7.430617808	0.065784458	-0.015662202		
			7.384003955	0.001980051	-0.000463499		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
			3.434420178	0.003821225	-0.000299315		
			3.441551425	0.008250455	-0.001348392		
			3.205932674	0.003066771	-0.000097182		
			3.157979936	0.013736145	-0.003367747		
			3.103235385	0.000484918	-0.000106770		
			2.832845300	0.000308073	-0.000064648		
			2.791554762	0.000017074	-0.000006495		
			1.579543927	0.000851749	-0.000068294		
			1.497724874	0.001653168	-0.000275099		
			1.366258841	0.000601345	-0.000019689		
			1.126777364	0.001859724	-0.000458339		
			1.091243033	0.000066117	-0.000014384		
			0.607791415	0.000116631	-0.000009394		
			0.489967429	0.000153993	-0.000025702		
			0.414730443	0.000046624	-0.000001534		
2P3/2 -- (4)	824.248416	-1723.481510	14.210200293	0.192597979		-0.002132561	0.000298343
			6.887796028	0.018618766	-0.001441807		
			7.389258669	0.011409291	-0.000528875		
			6.639168542	0.023489800	-0.002183298		
			7.506752752	0.019606425	-0.001911375		
			7.130104533	0.032471340	-0.009229938		
			3.386751766	0.004501697	-0.000374889		
			3.454385765	0.002717455	-0.000145399		
			3.131715135	0.005451500	-0.000561623		
			3.171907369	0.003974857	-0.000391014		
			3.051809970	0.006454583	-0.001895620		
			2.832472758	0.000209189	-0.000020425		
			2.789381554	0.000180730	-0.000058444		
			1.568951815	0.000992198	-0.000084047		
			1.499858484	0.000545437	-0.000030059		
			1.351979157	0.001057381	-0.000111112		
			1.128607020	0.000535836	-0.000052817		
			1.084465541	0.000847817	-0.000250303		
			0.606341836	0.000135569	-0.000011522		
			0.490159428	0.000050823	-0.000002815		
			0.413626532	0.000081843	-0.000008627		
3S1/2 -- (2)	377.034405	-802.913195	5.341085767	0.011759231		-0.070842172	0.002801527
			4.921596210	0.004044092	-0.000055516		
			4.662060226	0.005851852	-0.000499514		
			5.340870743	0.003669206	-0.000118613		
			5.260907140	0.004824528	-0.000145745		
			2.919893296	0.001918714	-0.000081031		
			3.005406291	0.002617666	-0.000455571		
			2.777986314	0.001723094	-0.000211471		
			2.808358327	0.001049583	-0.000102217		
			2.743721669	0.001021937	-0.000087583		
			2.727346261	0.000925242	-0.000129765		
			2.692113027	0.000422296	-0.000126785		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
5S1/2			1.470453642	0.000426055	-0.000156561		
5P1/2			1.411805910	0.000551672	-0.000098995		
5P3/2			1.284627218	0.000353887	-0.000046427		
5D3/2			1.080193081	0.000151831	-0.000015985		
5D5/2			1.044401957	0.000134655	-0.000013492		
6S1/2			0.592979461	0.000058271	-0.000021522		
6P1/2			0.481983476	0.000051740	-0.000009323		
6P3/2			0.408426367	0.000027606	-0.000003654		
3P1/2 -- (2)	372.220609	-796.196248	5.679899832	0.023392423		-0.010221658	0.000586241
3P3/2			5.121393492	0.002725039	-0.000024231		
3D3/2			5.228286094	0.008284668	-0.000606036		
3D5/2			5.523615923	0.003603752	-0.000026957		
4S1/2			3.016282665	0.001636769	-0.000198709		
4P1/2			2.956593325	0.002716322	-0.000626255		
4P3/2			2.823038080	0.000855076	-0.000047426		
4D3/2			2.826173959	0.002414816	-0.000362142		
4D5/2			2.774888249	0.000686620	-0.000023828		
4F5/2			2.719268526	0.001574542	-0.000346923		
4F7/2			2.714768239	0.000174286	-0.000036792		
5S1/2			1.488883978	0.000354589	-0.000046265		
5P1/2			1.404688967	0.000536313	-0.000130787		
5P3/2			1.292723782	0.000169995	-0.000010575		
5D3/2			1.082739882	0.000354461	-0.000057137		
5D5/2			1.048416073	0.000088277	-0.000003636		
6S1/2			0.595436830	0.000048289	-0.000006378		
6P1/2			0.481354919	0.000049837	-0.000012247		
6P3/2			0.409046440	0.000013202	-0.000000834		
3P3/2 -- (4)	283.195117	-673.794827	4.958861099	0.011550448		-0.000580792	0.000079928
3D3/2			5.276725109	0.002592537	-0.000016752		
3D5/2			5.036490319	0.006370515	-0.000125529		
4S1/2			2.962782162	0.002361452	-0.000299396		
4P1/2			2.995581556	0.001041696	-0.000078065		
4P3/2			2.734970258	0.001885587	-0.000271258		
4D3/2			2.791072696	0.000920552	-0.000086508		
4D5/2			2.719468698	0.002008927	-0.000305699		
4F5/2			2.717249730	0.000802672	-0.000080834		
4F7/2			2.663955593	0.000771417	-0.000228719		
5S1/2			1.477631899	0.000486316	-0.000064529		
5P1/2			1.409675055	0.000205018	-0.000017133		
5P3/2			1.277203606	0.000359860	-0.000055312		
5D3/2			1.077954432	0.000130394	-0.000012894		
5D5/2			1.041331697	0.000271012	-0.000044918		
6S1/2			0.593910396	0.000065689	-0.000008788		
6P1/2			0.481782812	0.000019046	-0.000001617		
6P3/2			0.407861126	0.000027785	-0.000004308		
3D3/2 -- (4)	277.430031	-665.720612	5.754709998	0.019650394		-0.000009111	0.000001627
3D5/2			5.726295568	0.003599130	-0.000000232		
4S1/2			3.051104001	0.000904636	-0.000023095		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
			3.049095994	0.001799437	-0.000129423		
			2.842258519	0.000636882	-0.000016221		
			2.810439318	0.002160761	-0.000207986		
			2.803250393	0.000709317	-0.000010236		
			2.704185071	0.003549661	-0.000878601		
			2.725214560	0.000119205	-0.000014197		
			1.495786747	0.000194848	-0.000006413		
			1.420544820	0.000334733	-0.000025711		
			1.296209510	0.000122521	-0.000003719		
			1.081392851	0.000279543	-0.000029365		
			1.052041481	0.000092345	-0.000001578		
			0.596361869	0.000026519	-0.000000911		
			0.482796492	0.000030837	-0.000002396		
			0.409313580	0.000009472	-0.000000295		
3D5/2 -- (6)	259.341382	-638.932156	5.593702460	0.016381489		-0.000001643	0.000000442
			3.034212579	0.001061150	-0.000023195		
			3.057020304	0.000755082	-0.000011511		
			2.816149739	0.001247399	-0.000053306		
			2.854408539	0.000579913	-0.000011220		
			2.749908457	0.001919333	-0.000132219		
			2.752774185	0.000742867	-0.000055039		
			2.676517983	0.002214299	-0.000615630		
			1.492188135	0.000223198	-0.000006420		
			1.421315238	0.000145673	-0.000003003		
			1.291541620	0.000230197	-0.000010992		
			1.086243727	0.000076534	-0.000001761		
			1.045755002	0.000241823	-0.000018258		
			0.595872661	0.000030256	-0.000000912		
			0.482857829	0.000013494	-0.000000291		
			0.408956383	0.000017689	-0.000000859		
4S1/2 -- (2)	125.826302	-342.107884	2.421959596	0.001067145		-0.018523979	0.000730984
			2.150417909	0.000480095	-0.000025186		
			2.052736766	0.000637306	-0.000110902		
			2.188976091	0.000462264	-0.000042289		
			2.156724666	0.000412358	-0.000047046		
			2.201493368	0.000324177	-0.000028369		
			2.184732021	0.000322698	-0.000028917		
			1.330604155	0.000169130	-0.000073393		
			1.292674057	0.000154510	-0.000030398		
			1.184601070	0.000096477	-0.000017232		
			1.011801713	0.000036401	-0.000004111		
			0.980598189	0.000049874	-0.000004114		
			0.574862975	0.000023155	-0.000010339		
			0.471165382	0.000015128	-0.000003055		
			0.400870494	0.000007719	-0.000001396		
4P1/2 -- (2)	120.647132	-333.193735	2.422422518	0.001962320		-0.002645571	0.000151148
			2.191866354	0.000215095	-0.000003612		
			2.054952023	0.001097553	-0.000186417		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
4D5/2			2.203167221	0.000252673	-0.000007525		
4F5/2			2.159127965	0.000522145	-0.000369224		
4F7/2			2.202293356	0.000230716	-0.000008154		
5S1/2			1.353423536	0.000193209	-0.000028449		
5P1/2			1.268942274	0.000202411	-0.000058258		
5P3/2			1.191969757	0.000057933	-0.000004501		
5D3/2			1.006744430	0.000069670	-0.000010612		
5D5/2			0.982839378	0.000036467	-0.000001358		
6S1/2			0.577471815	0.000025422	-0.000003933		
6P1/2			0.469273717	0.000018662	-0.000005593		
6P3/2			0.401372983	0.000004562	-0.000000382		
4P3/2 -- (4)	93.452018	-290.605836	2.135155620	0.000973014		-0.000149291	0.000020464
4D3/2			2.124324670	0.000274637	-0.000009423		
4D5/2			2.009963396	0.000616190	-0.000056338		
4F5/2			2.116546294	0.000225062	-0.000010872		
4F7/2			2.074288230	0.000372594	-0.000031684		
5S1/2			1.332322617	0.000289637	-0.000043922		
5P1/2			1.280083028	0.000087549	-0.000007982		
5P3/2			1.164828753	0.000136395	-0.000024261		
5D3/2			1.003520882	0.000029809	-0.000002502		
5D5/2			0.970394273	0.000073165	-0.000006414		
6S1/2			0.574805718	0.000036494	-0.000005743		
6P1/2			0.469990621	0.000008026	-0.000000792		
6P3/2			0.399432530	0.000010432	-0.000001945		
4D3/2 -- (4)	84.992573	-274.544448	2.128404395	0.001291724		-0.000002577	0.000000459
4D5/2			2.121996838	0.000237855	-0.000000032		
4F5/2			2.013847649	0.000682465	-0.000081666		
4F7/2			2.111324594	0.000193538	-0.000001573		
5S1/2			1.336813474	0.000096306	-0.000003578		
5P1/2			1.269809122	0.000211856	-0.000023231		
5P3/2			1.178312298	0.000054222	-0.000002292		
5D3/2			0.990808980	0.000106008	-0.000012061		
5D5/2			0.973901349	0.000032356	-0.000000611		
6S1/2			0.575353701	0.000012477	-0.000000577		
6P1/2			0.469259920	0.000018029	-0.000002052		
6P3/2			0.400343002	0.000004100	-0.000000189		
4D5/2 -- (6)	79.596963	-265.095765	2.080455013	0.001073070		-0.000000463	0.000000124
4F5/2			2.092247679	0.000186189	-0.000004473		
4F7/2			2.005134794	0.000563815	-0.000032161		
5S1/2			1.329776696	0.000113206	-0.000003506		
5P1/2			1.275244357	0.000064973	-0.000001421		
5P3/2			1.169046440	0.000121015	-0.000009139		
5D3/2			1.001032676	0.000028129	-0.000000711		
5D5/2			0.962424907	0.000091779	-0.000007477		
6S1/2			0.574485978	0.000014256	-0.000000573		
6P1/2			0.469573034	0.000005770	-0.000000160		
6P3/2			0.399696011	0.000008850	-0.000000693		
4F5/2 -- (6)	65.747799	-238.184143	2.074188794	0.001202215		-0.000000001	0.000000000

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM	6P4	Z=84 A=209 R=1.34576E-04 A.U.					
4F7/2 -- (8)	63.949706	-234.607755	2.094788731 1.327444515 1.263572369 1.170941302 0.992669720 0.969002373 0.574318795 0.468836386 0.399838545 2.055262971	0.000191279 0.000057489 0.000076774 0.000036364 0.000062779 0.000020589 0.000007560 0.000006704 0.000002756 0.001103235	-0.000000001 -0.000000000 -0.000000151 -0.000000070 -0.000002100 -0.000000153 -0.000000031 -0.000000058 -0.000000014 -0.000000000	-0.000000000	0.000000000
5S1/2 -- (2)	34.379258	-144.666306	1.323713982 1.268420140 1.165301550 0.997372083 0.963340379 0.573863029 0.469053163 0.399478631 1.108499139 0.951605964	0.000071839 0.000049005 0.000061900 0.000023507 0.000054513 0.000008927 0.000004231 0.000004487 0.000088442 0.000066034	-0.000000000 -0.000000018 -0.000000164 -0.000000069 -0.000001367 -0.000000030 -0.000000012 -0.000000029 -0.000000000 -0.000007133	-0.004155587	0.000163899
5P1/2 -- (2)	30.287572	-134.678540	0.906918482 0.859973081 0.840968190 0.536278314 0.449292655 0.385334444 1.045980335 0.940869458 0.795328680 0.839137541	0.000071437 0.000049430 0.000025580 0.000008969 0.000003760 0.000002696 0.000141571 0.000015062 0.000121590 0.000009876	-0.000017951 -0.000006548 -0.000066532 -0.000004280 -0.000000842 -0.000000821 -0.000540804 -0.000000339 -0.000027610 -0.000000999	-0.000540804	0.000030870
5P3/2 -- (4)	23.167921	-118.937321	0.538858142 0.442709087 0.385589594 0.914300291 0.820075919 0.771218748 0.530789694 0.444660432 0.380626631 0.753087108	0.000014708 0.000006732 0.000001580 0.000068653 0.000027141 0.000048824 0.000020922 0.000003186 0.000003762 0.000055478	-0.000002271 -0.000002106 -0.000000132 -0.000068653 -0.000002117 -0.000010790 -0.000003267 -0.000000302 -0.000000700 -0.000000002	-0.000029613	0.000004055
5D3/2 -- (4)	15.558585	-95.920797	0.428024733 0.376075763 0.730683810 0.508182492 0.431980539 0.372643693	0.000009164 0.000001726 0.000044869 0.000006775 0.000002576 0.000004345	-0.000000897 -0.000000381 -0.000000064 -0.000000034 -0.000000034 -0.000000347	-0.000000065	0.000000017

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
POLONIUM 6P4 Z=84 A=209 R=1.34576E-04 A.U.							
6S1/2 -- (2)	5.573091	-52.696490	0.436196818	0.000004432		-0.000569759	0.000022469
6P1/2			0.344045380	0.000005173	-0.000000753		
6P3/2			0.313420481	0.000003615	-0.000001023		
6P1/2 -- (2)	3.453890	-41.984010	0.350440259	0.000004509		-0.000050547	0.000002885
6P3/2			0.303378606	0.000000441	-0.000000007		
6P3/2 -- (2)	2.239841	-35.160723	0.285600332	0.000001795		-0.000002300	0.000000315
ETOT	-22208.79274	26072.88517	-56429.56834	8125.75409	30.206900396	-3.204574045	-5.082286657
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
1S1/2 -- (2)	5051.716919	-9097.038969	62.490740068	9.162411839		-2.213998291	0.096074824
2S1/2			19.553798749	0.500078704	-0.060634643		
2P1/2			24.074108519	1.034744281	-0.134742744		
2P3/2			19.768489286	0.454780483	-0.131434939		
3S1/2			8.176391276	0.109622508	-0.014211711		
3P1/2			9.083008220	0.208287565	-0.026760885		
3P3/2			7.899845139	0.100690622	-0.030001959		
3D3/2			8.041238719	0.004533838	-0.000524580		
3D5/2			7.711386775	0.001793491	-0.000574773		
4S1/2			3.749562478	0.028449582	-0.003741935		
4P1/2			3.904495211	0.051291571	-0.006570560		
4P3/2			3.461631617	0.024836893	-0.007450857		
4D3/2			3.331626293	0.001234040	-0.000143355		
4D5/2			3.215161828	0.000486601	-0.000157395		
4F5/2			2.905017058	0.000003458	-0.000000367		
4F7/2			2.860815302	0.000001321	-0.000000435		
5S1/2			1.678956204	0.006488698	-0.000856444		
5P1/2			1.624175503	0.010617516	-0.001359203		
5P3/2			1.446777416	0.005014509	-0.001506625		
5D3/2			1.195189102	0.000186016	-0.000021626		
5D5/2			1.150610407	0.000071874	-0.000023289		
6S1/2			0.650365142	0.000957737	-0.000126502		
6P1/2			0.537292437	0.001119904	-0.000143347		
6P3/2			0.453042592	0.000446150	-0.000134082		
2S1/2 -- (2)	1227.796931	-2264.746918	14.276749321	0.193460641		-0.330081452	0.013459435
2P1/2			14.222420146	0.059125248	-0.000084372		
2P3/2			13.078340971	0.084545893	-0.002473589		
3S1/2			6.768951968	0.023137821	-0.005602700		
3P1/2			7.424629212	0.039317888	-0.006090009		
3P3/2			6.789202540	0.025733589	-0.003068033		
3D3/2			7.538152762	0.023201100	-0.003182463		
3D5/2			7.291012538	0.009992860	-0.003135181		
4S1/2			3.399352648	0.005953073	-0.001518019		
4P1/2			3.501531984	0.010037419	-0.001600044		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-V-P)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
4P3/2			3.195348781	0.006534731	-0.000856880		
4D3/2			3.215745937	0.004595365	-0.000666344		
4D5/2			3.119058553	0.002079718	-0.000666885		
4F5/2			2.901465556	0.000281971	-0.000037041		
4F7/2			2.857655425	0.000101321	-0.000036009		
5S1/2			1.599774317	0.001354535	-0.000348865		
5P1/2			1.540968596	0.002090536	-0.000335063		
5P3/2			1.393321347	0.001325325	-0.000177667		
5D3/2			1.178224055	0.000653794	-0.000095800		
5D5/2			1.136833661	0.000293442	-0.000094287		
6S1/2			0.638697840	0.000199832	-0.000051567		
6P1/2			0.528519718	0.000220728	-0.000035410		
6P3/2			0.448290930	0.000117998	-0.000015875		
2P1/2 -- (2)	1226.258674	-2263.074918	17.643595361	0.442391821		-0.043848066	0.002608302
2P3/2			15.363664025	0.054127460	-0.000158370		
3S1/2			7.204512600	0.015758153	-0.001102690		
3P1/2			7.421113855	0.036680158	-0.005455509		
3P3/2			7.083099390	0.013064348	-0.000349908		
3D3/2			7.549005416	0.068611622	-0.016334658		
3D5/2			7.493601223	0.002053403	-0.000482533		
4S1/2			3.501177185	0.004037999	-0.000315366		
4P1/2			3.511242696	0.008736227	-0.001425648		
4P3/2			3.264313131	0.003219240	-0.000101858		
4D3/2			3.220934523	0.014481060	-0.003550361		
4D5/2			3.163180420	0.000508439	-0.000112409		
4F5/2			2.902243787	0.000329276	-0.000069091		
4F7/2			2.859377935	0.000018221	-0.000006936		
5S1/2			1.622481341	0.000917910	-0.000073404		
5P1/2			1.543399152	0.001795278	-0.000298372		
5P3/2			1.407105964	0.000649526	-0.000021243		
5D3/2			1.179053169	0.002085414	-0.000514018		
5D5/2			1.143103074	0.000074043	-0.000016170		
6S1/2			0.642034475	0.000135391	-0.000010878		
6P1/2			0.528783670	0.000189118	-0.000031530		
6P3/2			0.449515363	0.000057782	-0.000001900		
2P3/2 -- (4)	846.389732	-1767.784336	14.401934077	0.200055024		-0.002291401	0.000328664
3S1/2			7.003561373	0.019539166	-0.001524934		
3P1/2			7.516765061	0.011958601	-0.000556243		
3P3/2			6.737236535	0.024477645	-0.002277920		
3D3/2			7.621786042	0.020463636	-0.001991533		
3D5/2			7.232988868	0.033853666	-0.009623402		
4S1/2			3.450663227	0.004742465	-0.000397626		
4P1/2			3.522709891	0.002863117	-0.000153688		
4P3/2			3.186918913	0.005716998	-0.000589847		
4D3/2			3.234268804	0.004185240	-0.000410950		
4D5/2			3.109816868	0.006793752	-0.001995707		
4F5/2			2.901806012	0.000225735	-0.000022021		
4F7/2			2.857069920	0.000194887	-0.0000063039		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
5S1/2			1.611034697	0.001065603	-0.000090874		
5P1/2			1.545286046	0.000589314	-0.000032592		
5P3/2			1.391785683	0.001140645	-0.000120073		
5D3/2			1.180910597	0.000599879	-0.000059022		
5D5/2			1.135596800	0.000952118	-0.000281201		
6S1/2			0.640347088	0.000156813	-0.000013419		
6P1/2			0.528973887	0.000062098	-0.000003452		
6P3/2			0.448156682	0.000101286	-0.000010697		
3S1/2 -- (2)	391.597931	-829.264386	5.432586053	0.012377646		-0.076247242	0.003081112
3P1/2			5.008193208	0.004250430	-0.000056961		
3P3/2			4.736612346	0.006133366	-0.000539926		
3D3/2			5.428453579	0.003849551	-0.000125769		
3D5/2			5.344931147	0.005048662	-0.000155136		
4S1/2			2.973766830	0.002029357	-0.000719736		
4P1/2			3.063547109	0.002782945	-0.000483926		
4P3/2			2.826454130	0.001794748	-0.000220777		
4D3/2			2.862518467	0.001106939	-0.000107750		
4D5/2			2.795498564	0.001078785	-0.000092037		
4F5/2			2.792860506	0.000989871	-0.000138869		
4F7/2			2.756409767	0.000451833	-0.000135700		
5S1/2			1.508471060	0.000459503	-0.000168749		
5P1/2			1.452949124	0.000601553	-0.000107875		
5P3/2			1.321193161	0.000379618	-0.000049912		
5D3/2			1.128274687	0.000170540	-0.000017972		
5D5/2			1.091988259	0.000151710	-0.000015180		
6S1/2			0.625364849	0.000067692	-0.000024991		
6P1/2			0.519279550	0.000063821	-0.000011495		
6P3/2			0.441904710	0.000033993	-0.000004512		
3P1/2 -- (2)	386.692042	-822.460688	5.781189422	0.024640622		-0.011353991	0.000664187
3P3/2			5.204518006	0.002827073	-0.000026837		
3D3/2			5.315039770	0.008715237	-0.000647947		
3D5/2			5.613297046	0.003768267	-0.000028904		
4S1/2			3.072798034	0.001727965	-0.000209495		
4P1/2			3.013788376	0.002878646	-0.000663254		
4P3/2			2.872892774	0.000893815	-0.000049922		
4D3/2			2.881046158	0.002536712	-0.000379528		
4D5/2			2.827674469	0.000726345	-0.000025112		
4F5/2			2.784703671	0.001684556	-0.000371304		
4F7/2			2.780009660	0.000186386	-0.000039381		
5S1/2			1.527768631	0.000381751	-0.000049774		
5P1/2			1.445548491	0.000582885	-0.000142096		
5P3/2			1.329772834	0.000182954	-0.000011465		
5D3/2			1.131093435	0.000396779	-0.000063914		
5D5/2			1.096407770	0.000099632	-0.000004101		
6S1/2			0.628133825	0.000055989	-0.000007394		
6P1/2			0.518542947	0.000061245	-0.000015051		
6P3/2			0.442658073	0.000016305	-0.000001039		
3P3/2 -- (4)	291.802225	-692.319161	5.032408159	0.012064085		-0.000627085	0.000088442

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
3D3/2			5.356607824	0.002706122	-0.000017117		
3D5/2			5.111021160	0.006647742	-0.000130305		
4S1/2			3.016401811	0.002504186	-0.000319001		
4P1/2			3.052031968	0.001103877	-0.000082984		
4P3/2			2.781584168	0.001983088	-0.000285694		
4D3/2			2.843648827	0.000976057	-0.000091837		
4D5/2			2.769578694	0.002122350	-0.000323774		
4F5/2			2.781636164	0.000858167	-0.000086409		
4F7/2			2.726473664	0.000825304	-0.000244559		
5S1/2			1.515680370	0.000524893	-0.000069979		
5P1/2			1.450426515	0.000222567	-0.000018672		
5P3/2			1.313216969	0.000389247	-0.000059949		
5D3/2			1.125675052	0.000147081	-0.000014570		
5D5/2			1.088485588	0.000305571	-0.000050845		
6S1/2			0.626367692	0.000076315	-0.000010260		
6P1/2			0.519011330	0.000023376	-0.000001994		
6P3/2			0.441208389	0.000034474	-0.000005359		
3D3/2 -- (4)	285.974586	-684.186185	5.844224266	0.020544511		-0.000010148	0.000001858
3D5/2			5.812919442	0.003756675	-0.000000256		
4S1/2			3.107144735	0.000953589	-0.000024422		
4P1/2			3.107313095	0.001903685	-0.000137763		
4P3/2			2.891495195	0.000669570	-0.000017078		
4D3/2			2.863955058	0.002279978	-0.000220138		
4D5/2			2.855779211	0.000748102	-0.000010826		
4F5/2			2.768452199	0.003800163	-0.000940777		
4F7/2			2.790407350	0.000127906	-0.000015206		
5S1/2			1.534684265	0.000209343	-0.000006926		
5P1/2			1.461936369	0.000362635	-0.000028031		
5P3/2			1.333230266	0.000132507	-0.000004037		
5D3/2			1.129501956	0.000313388	-0.000033069		
5D5/2			1.100237697	0.000103907	-0.000001786		
6S1/2			0.629130593	0.000030681	-0.000001061		
6P1/2			0.520225134	0.000037752	-0.000002953		
6P3/2			0.442961713	0.000011751	-0.000000368		
3D5/2 -- (6)	266.884093	-655.958446	5.675985356	0.017095921		-0.000001816	0.000000501
3D5/2			3.089401117	0.001117462	-0.000024527		
4P1/2			3.114909219	0.000796172	-0.000012182		
4P3/2			2.864449017	0.001309999	-0.000056109		
4D3/2			2.908534736	0.000611454	-0.000011884		
4D5/2			2.800788034	0.002021745	-0.000139770		
4F5/2			2.818707706	0.000795664	-0.000058899		
4F7/2			2.739637847	0.002370418	-0.000659080		
5S1/2			1.530830898	0.000239477	-0.000006933		
5P1/2			1.462631137	0.000157417	-0.000003269		
5P3/2			1.328255258	0.000248534	-0.000011912		
5D3/2			1.134699451	0.000085775	-0.000001989		
5D5/2			1.093332978	0.000271543	-0.000020607		
6S1/2			0.628566490	0.000034951	-0.000001062		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.							
6P1/2			0.520285316	0.000016484	-0.000000359		
6P3/2			0.442525198	0.000021900	-0.000001069		
4S1/2 -- (2)	131.213184	-353.714362	2.467333500	0.001131163		-0.020042100	0.000808130
4P1/2			2.191864023	0.000505748	-0.000026047		
4P3/2			2.090044916	0.000677280	-0.000119642		
4D3/2			2.231048195	0.000489242	-0.000044761		
4D5/2			2.197606131	0.000435792	-0.000049947		
4F5/2			2.251526291	0.000344361	-0.000029909		
4F7/2			2.234332362	0.000344607	-0.000030527		
5S1/2			1.363462405	0.000183036	-0.000079536		
5P1/2			1.328452658	0.000170055	-0.000033444		
5P3/2			1.216704600	0.000104042	-0.000018856		
5D3/2			1.054202922	0.000041033	-0.000004657		
5D5/2			1.022702794	0.000056331	-0.000004672		
6S1/2			0.605162041	0.000026985	-0.000012070		
6P1/2			0.506507971	0.000018854	-0.000003809		
6P3/2			0.432859850	0.000009561	-0.000001754		
4P1/2 -- (2)	125.943642	-344.709357	2.470046243	0.002083996		-0.002957201	0.000172307
4P3/2			2.232455935	0.000224875	-0.000004044		
4D3/2			2.095385253	0.001166287	-0.000198721		
4D5/2			2.245810353	0.000266632	-0.000008051		
4F5/2			2.209082945	0.000555322	-0.000073108		
4F7/2			2.253207083	0.000246955	-0.000008635		
5S1/2			1.387303408	0.000208177	-0.000030694		
5P1/2			1.303882893	0.000220746	-0.000063717		
5P3/2			1.224563106	0.000062394	-0.000004925		
5D3/2			1.048867347	0.000078550	-0.000012050		
5D5/2			1.025213890	0.000041166	-0.000001553		
6S1/2			0.608084858	0.000029473	-0.000004573		
6P1/2			0.504310528	0.000023003	-0.000006922		
6P3/2			0.433472136	0.000005643	-0.000000481		
4P3/2 -- (4)	96.908184	-299.465288	2.172430151	0.001026153		-0.000162349	0.000022803
4D3/2			2.163742375	0.000288625	-0.000009722		
4D5/2			2.046867997	0.000649647	-0.000058692		
4F5/2			2.162691256	0.000237946	-0.000011275		
4F7/2			2.119587239	0.000396110	-0.000032903		
5S1/2			1.364871616	0.000314811	-0.000047886		
5P1/2			1.314942147	0.000095848	-0.000008777		
5P3/2			1.195895692	0.000148169	-0.000026495		
5D3/2			1.045058014	0.000033917	-0.000002881		
5D5/2			1.011509154	0.000083294	-0.000007398		
6S1/2			0.605038164	0.000042575	-0.000006728		
6P1/2			0.505084965	0.000009920	-0.000000985		
6P3/2			0.431127780	0.000012992	-0.000002439		
4D3/2 -- (4)	88.384406	-283.376294	2.170252863	0.001369132		-0.000002903	0.000000530
4D5/2			2.163175419	0.000251609	-0.000000036		
4F5/2			2.060311539	0.0000721739	-0.000084806		
4F7/2			2.159682083	0.000207192	-0.000001643		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ASTATINE	6P5	Z=85 A=210 R=1.34790E-04 A.U.					
5S1/2			1.370118798	0.000104045	-0.000003905		
5P1/2			1.304786381	0.000231035	-0.000025474		
5P3/2			1.210335739	0.000058824	-0.000002499		
5D3/2			1.031665518	0.000119492	-0.000013759		
5D5/2			1.015514453	0.000036579	-0.000000701		
6S1/2			0.605723587	0.000014494	-0.000000680		
6P1/2			0.504285898	0.000022143	-0.000002538		
6P3/2			0.432241646	0.000005099	-0.000000237		
4D5/2 -- (6)	82.672616	-273.423046	2.120336211	0.001135885		-0.000000518	0.000000143
4F5/2			2.139546918	0.000197270	-0.000004613		
4F7/2			2.050680631	0.000597878	-0.000053916		
5S1/2			1.362701877	0.000122148	-0.000003827		
5P1/2			1.310272246	0.000070616	-0.000001562		
5P3/2			1.200616584	0.000131192	-0.000009944		
5D3/2			1.042562699	0.000031697	-0.000000815		
5D5/2			1.003069373	0.000103619	-0.000008555		
6S1/2			0.604739806	0.000016530	-0.000000675		
6P1/2			0.504630240	0.000007077	-0.000000200		
6P3/2			0.431465329	0.000010981	-0.000000865		
4F5/2 -- (6)	68.901027	-246.926926	2.128812298	0.001293937		-0.000000001	0.000000000
4F7/2			2.149930390	0.000206186	-0.000000001		
5S1/2			1.362376892	0.000062302	-0.000000003		
5P1/2			1.300152403	0.000083750	-0.000000199		
5P3/2			1.204032599	0.000039684	-0.000000088		
5D3/2			1.034715054	0.000070855	-0.000002430		
5D5/2			1.011061286	0.000023370	-0.000000179		
6S1/2			0.604816780	0.000008816	-0.000000039		
6P1/2			0.503950090	0.000008254	-0.000000077		
6P3/2			0.431750704	0.000003447	-0.000000018		
4F7/2 -- (8)	66.994615	-243.169701	2.199182853	0.001187140		-0.000000000	0.000000000
5S1/2			1.358524139	0.000077627	-0.000000001		
5P1/2			1.304968872	0.000053318	-0.000000024		
5P3/2			1.198262678	0.000067292	-0.000000205		
5D3/2			1.039584805	0.000026519	-0.000000082		
5D5/2			1.005057351	0.000061607	-0.000001584		
6S1/2			0.604308860	0.000010384	-0.000000038		
6P1/2			0.504188831	0.000005202	-0.000000016		
6P3/2			0.431326823	0.000005591	-0.000000040		
5S1/2 -- (2)	36.533200	-150.703388	1.137283570	0.000096193		-0.004585711	0.000184803
5P1/2			0.977912913	0.000070779	-0.000007542		
5P3/2			0.931819526	0.000078491	-0.000019759		
5D3/2			0.892736818	0.000055017	-0.000007271		
5D5/2			0.873827182	0.000028775	-0.000007297		
6S1/2			0.562916998	0.000010582	-0.000005091		
6P1/2			0.481209776	0.000004756	-0.000001073		
6P3/2			0.414659421	0.000003371	-0.000001036		
5P1/2 -- (2)	32.383482	-140.730652	1.076507683	0.000155351		-0.000620172	0.000036102
5P3/2			0.967972549	0.000016294	-0.000000397		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
ASTATINE 6P5 Z=85 A=210 R=1.34790E-04 A.U.								
	503/2		0.825855706	0.000135675	-0.000030757			
	505/2		0.872747119	0.000011223	-0.000001124			
	6S1/2		0.565933790	0.000017191	-0.000002671			
	6P1/2		0.473776244	0.000008406	-0.000002675			
	6P3/2		0.415009375	0.000001977	-0.000000172			
5P3/2 -- (4)	24.694030	-124.035424	0.940277867	0.000075130		-0.000033141	0.000004651	
	503/2		0.851308060	0.000029869	-0.000002292			
	505/2		0.800962805	0.000054198	-0.000011801			
	6S1/2		0.557077916	0.000024762	-0.000003891			
	6P1/2		0.475881284	0.000004019	-0.000000386			
	6P3/2		0.409210298	0.000004750	-0.000000906			
5D3/2 -- (4)	17.118270	-101.619503	0.787239517	0.000063635		-0.000000442	0.000000081	
	505/2		0.782500986	0.000011632	-0.000000002			
	6S1/2		0.539409970	0.000006045	-0.000000121			
	6P1/2		0.458600878	0.000011706	-0.000001200			
	6P3/2		0.404697084	0.000002215	-0.000000108			
5D5/2 -- (6)	15.783882	-97.821754	0.764645110	0.000051625		-0.000000077	0.000000021	
	6S1/2		0.534947116	0.000008058	-0.000000095			
	6P1/2		0.462689765	0.000003207	-0.000000047			
	6P3/2		0.401033771	0.000005533	-0.000000466			
6S1/2 -- (2)	6.372178	-56.460955	0.459762958	0.000005261		-0.0000677297	0.000027292	
	6P1/2		0.366983998	0.000006164	-0.000000890			
	6P3/2		0.335715135	0.000004540	-0.000001283			
6P1/2 -- (2)	4.155022	-45.952471	0.377697668	0.000005692		-0.000065566	0.000003816	
	6P3/2		0.327684442	0.000005551	-0.000000011			
6P3/2 -- (3)	2.722735	-38.602934	0.309099580	0.000002292		-0.000002954	0.000000414	
ETOT	-22886.70326	26995.98698	-58254.80634	8349.12034	31.524358001	-3.343143444	-5.421487390	0.236033967
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.								
	1S1/2 -- (2)	5224.667388	-9378.939244	63.549191459	9.528174875		-2.354278532	0.104487601
	2S1/2			19.906073974	0.521918309	-0.063408568		
	2P1/2			24.549080935	1.079574185	-0.139700433		
	2P3/2			20.039594456	0.471423976	-0.136236949		
	3S1/2			8.325433480	0.114615714	-0.014886858		
	3P1/2			9.260169415	0.217524191	-0.027747759		
	3P3/2			8.020377557	0.104857969	-0.031240850		
	3D3/2			8.165581238	0.004711143	-0.000542448		
	3D5/2			7.822257132	0.001861487	-0.000596467		
	4S1/2			3.823933012	0.029891679	-0.003938998		
	4P1/2			3.987743455	0.053864684	-0.006849400		
	4P3/2			3.524269322	0.026042260	-0.007811941		
	4D3/2			3.397388557	0.001296063	-0.000149823		
	4D5/2			3.276193735	0.000510722	-0.000165176		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON	6P6	Z=86 A=222 R=1.37310E-04 A.U.					
			2.974118579	0.000003704	-0.000000391		
			2.928220561	0.060001417	-0.000000467		
			1.724956839	0.006947066	-0.000918697		
			1.674831568	0.011420987	-0.001451217		
			1.489610307	0.005402107	-0.001623013		
			1.247557705	0.000206679	-0.000023910		
			1.201640807	0.000080037	-0.000025932		
			0.684472448	0.001092803	-0.000144622		
			0.575018580	0.001329425	-0.000168901		
			0.485436848	0.000534128	-0.000160518		
2S1/2 -- (2)	1274.249127	-2340.065838	14.523235312	0.202967985		-0.354031126	0.014751600
			14.479371261	0.062038662	-0.000086060		
			13.278613893	0.088059147	-0.002688808		
			6.885277602	0.024314402	-0.005881598		
			7.558120458	0.041399070	-0.006404227		
			6.893085676	0.026684267	-0.003098565		
			7.655937366	0.024216130	-0.003319333		
			7.398416511	0.010409056	-0.003269184		
			3.463720542	0.006286443	-0.001601645		
			3.571646388	0.010627278	-0.001691797		
			3.252172628	0.006828024	-0.000890650		
			3.278721711	0.004845879	-0.000702197		
			3.178221023	0.002189967	-0.000703198		
			2.970432865	0.000301366	-0.000039560		
			2.924949514	0.000108206	-0.000038464		
			1.641967208	0.001457511	-0.000375107		
			1.586817189	0.002267262	-0.000362910		
			1.433493522	0.001423104	-0.000189871		
			1.229188652	0.000728470	-0.000106694		
			1.186749062	0.000327512	-0.000105388		
			0.671440855	0.000229154	-0.000059094		
			0.564777845	0.000264195	-0.000042330		
			0.479893838	0.000140815	-0.000018860		
2P1/2 -- (2)	1272.846360	-2338.597237	17.972104880	0.464436264		-0.048524143	0.002944707
			15.602759261	0.056104568	-0.000173954		
			7.332226789	0.016561375	-0.001154917		
			7.555218984	0.038601481	-0.005730759		
			7.193510409	0.013608218	-0.000363889		
			7.668041357	0.071515787	-0.017025318		
			7.603422536	0.002127847	-0.000502009		
			3.568758198	0.004265401	-0.000332105		
			3.581842719	0.009247061	-0.001506598		
			3.323133801	0.003377190	-0.000106691		
			3.284277900	0.015254748	-0.003739996		
			3.223376166	0.000532593	-0.000118246		
			2.971249417	0.000351115	-0.000073665		
			2.926737723	0.000019399	-0.000007389		
			1.665832926	0.000988021	-0.000078790		

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TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON	6P6	Z=86 A=222 R=1.37310E-04 A.U.					
3P1/2 -- (2)	401.671881	-849.458955	5.883705059	0.025946501		-0.012602886	0.000751794
3P3/2			5.288245676	0.002931018	-0.000029694		
3D3/2			5.402422830	0.009165740	-0.0000692929		
3D5/2			5.703550950	0.003938018	-0.000030995		
4S1/2			3.129927301	0.001823390	-0.000220745		
4P1/2			3.071629595	0.003049619	-0.000702062		
4P3/2			2.923077504	0.000933569	-0.000052523		
4D3/2			2.936237025	0.002661650	-0.000397206		
4D5/2			2.883709772	0.000767825	-0.000026441		
4F5/2			2.849812946	0.001798977	-0.000396671		
4F7/2			2.844847978	0.000198913	-0.000042073		
5S1/2			1.566974944	0.000410474	-0.000053478		
5P1/2			1.486656466	0.000632402	-0.000154098		
5P3/2			1.366869798	0.000196464	-0.000012405		
5D3/2			1.178243410	0.000440817	-0.000070946		
5D5/2			1.143015127	0.000111589	-0.000004588		
6S1/2			0.659717610	0.000064146	-0.000008469		
6P1/2			0.553225368	0.000073317	-0.000018017		
6P3/2			0.473332465	0.000019461	-0.000001250		
3P3/2 -- (4)	300.568233	-711.137215	5.106179560	0.012593818		-0.000676488	0.000097748
3D3/2			5.436737405	0.002823214	-0.000017485		
3D5/2			5.185700847	0.006933147	-0.000135263		
4S1/2			3.070494624	0.002654612	-0.000339748		
4P1/2			3.109019490	0.001169320	-0.000088166		
4P3/2			2.828420910	0.002084348	-0.000300705		
4D3/2			2.896438148	0.001033996	-0.000097402		
4D5/2			2.819835856	0.002240184	-0.000342569		
4F5/2			2.845605562	0.000915828	-0.000092199		
4F7/2			2.788525021	0.000881308	-0.000261012		
5S1/2			1.554002496	0.000565845	-0.000075794		
5P1/2			1.491388255	0.000241201	-0.000020312		
5P3/2			1.349236286	0.000420168	-0.000064839		
5D3/2			1.172153895	0.000164699	-0.000016342		
5D5/2			1.134221598	0.000341828	-0.000057092		
6S1/2			0.657698470	0.000087609	-0.000011837		
6P1/2			0.553720552	0.000027947	-0.000002395		
6P3/2			0.471617781	0.000041342	-0.000006442		
3D3/2 -- (4)	294.675040	-702.941923	5.934023163	0.021466956		-0.000011290	0.000002119
3D5/2			5.899713652	0.003918731	-0.000000281		
4S1/2			3.163704534	0.001004685	-0.000025811		
4P1/2			3.166104462	0.002013117	-0.000146589		
4P3/2			2.940984697	0.000703505	-0.000017969		
4D3/2			2.917699238	0.002403935	-0.000232804		
4D5/2			2.908479869	0.000788379	-0.000011439		
4F5/2			2.832321917	0.004060853	-0.001005495		
4F7/2			2.855141620	0.000136970	-0.000016261		
5S1/2			1.573874369	0.000224618	-0.000007470		
5P1/2			1.503555730	0.000392177	-0.000030506		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADON	6P6	Z=86	A=222	R=1.37310E-04	A.U.		
			1.370273881	0.000143011	-0.000004373		
			1.176380464	0.000348842	-0.000036972		
			1.147021295	0.000116009	-0.000002006		
			0.660775675	0.000035073	-0.000001222		
			0.555136452	0.000045022	-0.000003546		
			0.473664245	0.000014092	-0.000000443		
3D5/2 -- (6)	274.540032	-673.215424	5.758335659	0.017830838		-0.000002004	0.000000568
			3.145072789	0.001176164	-0.000025920		
4P1/2			3.173343636	0.000839048	-0.000012884		
4P3/2			2.912972770	0.001374896	-0.000059027		
4D3/2			2.962871255	0.000644204	-0.000012575		
4D5/2			2.851805526	0.002127946	-0.000147626		
4F5/2			2.884223590	0.000850632	-0.000062911		
4F7/2			2.802285071	0.002532794	-0.000704274		
5S1/2			1.569753147	0.000256598	-0.000007477		
5P1/2			1.504162933	0.000169795	-0.000003551		
5P3/2			1.364980097	0.000267779	-0.000012883		
5D3/2			1.181910356	0.000095448	-0.000002229		
5D5/2			1.139491996	0.000302559	-0.000023076		
6S1/2			0.660132891	0.000039893	-0.000001222		
6P1/2			0.555191288	0.000019614	-0.000000431		
6P3/2			0.473148385	0.000026207	-0.000001285		
4S1/2 -- (2)	136.792238	-365.627244	2.513166101	0.001198425		-0.021667769	0.000892633
			2.233757734	0.000532534	-0.000026915		
4P1/2			2.127650578	0.000719623	-0.000129046		
4P3/2			2.273411896	0.000517553	-0.000047372		
4D3/2			2.238738774	0.000460204	-0.000053018		
4D5/2			2.301465459	0.000365394	-0.000031510		
4F7/2			2.283806746	0.000367445	-0.000032202		
5S1/2			1.396559268	0.000197816	-0.000086067		
5P1/2			1.364414828	0.000186796	-0.000036720		
5P3/2			1.248815757	0.000111945	-0.000020593		
5D3/2			1.095448259	0.000045930	-0.000005239		
5D5/2			1.063488990	0.000063120	-0.000005267		
6S1/2			0.634361159	0.000031072	-0.000013921		
6P1/2			0.539372664	0.000022881	-0.000004624		
6P3/2			0.461976421	0.000011443	-0.000002129		
4P1/2 -- (2)	131.439081	-356.541070	2.518197903	0.002212124		-0.003302875	0.000196224
			2.273370151	0.000234951	-0.000004524		
4P3/2			2.136126114	0.001238940	-0.000211840		
4D3/2			2.288731947	0.000281092	-0.000008613		
4D5/2			2.258990485	0.000589972	-0.000077165		
4F5/2			2.304030835	0.000263901	-0.000009137		
4F7/2			1.421445297	0.000224004	-0.000033070		
5S1/2			1.339008579	0.000240306	-0.000069547		
5P1/2			1.257181223	0.000067042	-0.000005377		
5P3/2			1.089853617	0.000087919	-0.000013588		
5D3/2			1.066281164	0.000046100	-0.000001762		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)				
RADON	6P6	Z=86	A=222 R=1.37310E-04 A.U.								
4P3/2 -- (4)	6S1/2	100.450221	-308.490290	0.637598959	0.000033764	-0.000005253	-0.000176386 0.000025379				
	6P1/2			0.536884195	0.000027619	-0.000008341					
	6P3/2			0.462698056	0.000006745	-0.000000586					
	4D3/2			2.209890684	0.001081500						
	4D5/2			2.203337239	0.000303139	-0.000010024					
	4F5/2			2.083915568	0.000684439	-0.000061121					
	4F7/2			2.208631700	0.000251275	-0.000011681					
	5S1/2			2.164667112	0.000420504	-0.000034136					
	5P1/2			1.397618435	0.000341769	-0.000052140					
	5P3/2			1.349934657	0.000104758	-0.000009630					
	5D3/2			1.226942565	0.000160623	-0.000028870					
	5D5/2			1.085413909	0.000038315	-0.000003292					
	6S1/2			1.051291402	0.000094068	-0.000008461					
	6P1/2			0.634156938	0.000049083	-0.000007787					
	6P3/2			0.537692784	0.000011942	-0.000001194					
4D3/2 -- (4)	6P3/2	91.860792	-292.371447	0.459957646	0.000015640	-0.000002955	-0.0000003265 0.000000611				
	4D5/2			2.212282400	0.001449923						
	4F5/2			2.204502029	0.000265914	-0.000000040					
	4F7/2			2.106636544	0.000762428	-0.000087992					
	5S1/2			2.207843421	0.000221334	-0.000001714					
	5P1/2			1.403644946	0.000112250	-0.000004254					
	5P3/2			1.339915754	0.000251518	-0.000027881					
	5D3/2			1.242359382	0.000063682	-0.000002718					
	5D5/2			1.071390233	0.000133730	-0.000015575					
	6S1/2			1.055816221	0.000041028	-0.000000798					
	6P1/2			0.634991452	0.000016636	-0.000000791					
	6P3/2			0.536843184	0.000026496	-0.000003058					
	4D5/2			0.461274063	0.000006129	-0.000000288					
	4D5/2 -- (6)			4F5/2	85.817852	-281.891455		2.160333716	0.001201309		-0.000000578 0.000000163
				4F7/2				2.186647217	0.000208748	-0.000004752	
5S1/2		2.096025782	0.000633178	-0.000055678							
5P1/2		1.395831893	0.000131622	-0.000004169							
5P3/2		1.345442680	0.000076610	-0.000001713							
5D3/2		1.232176164	0.000141928	-0.000010798							
5D5/2		1.082932825	0.000035462	-0.000000926							
6S1/2		1.042411063	0.000116079	-0.000009706							
6P1/2		0.633888572	0.000018939	-0.000000786							
6P3/2		0.537211171	0.000008456	-0.000000243							
4F5/2		0.460372590	0.000013170	-0.000001043							
4F5/2 -- (6)		4F7/2	72.112324	-255.774703			2.183039175	0.001389601		-0.000000001 0.000000000	
		5S1/2					2.204642155	0.000221739	-0.000000001		
		5P1/2					1.397464863	0.000067396	-0.000000007		
		5P3/2					1.336844790	0.000091151	-0.000000254		
	5D3/2	1.237094105			0.000043194	-0.000000107					
	5D5/2	1.075662529			0.000079365	-0.000002782					
	6S1/2	1.051856600			0.000026306	-0.000000207					
	6P1/2	0.634237635			0.000010154	-0.000000049					
	6P3/2	0.536626044			0.000009896	-0.000000100					

TABLE 1.- CONTINUED

LEVEL	(ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)*	E(RET)	E(V-P)	E(H-VP)
RADON 6P6 Z=86 A=222 R=1.37310E-04 A.U.								
4F7/2	-- 6P3/2 (8)	70.092115	-251.827391	0.463823176 2.162654822	0.000004165 0.001274567	-0.000000024	-0.000000000	0.000000000
	5S1/2			1.393478824	0.000083740	-0.000000003		
	5P1/2			1.341630273	0.000057889	-0.000000031		
	5P3/2			1.231182780	0.000072980	-0.000000251		
	5D3/2			1.080687383	0.000029698	-0.000000097		
	5D5/2			1.045514020	0.000069064	-0.000001815		
	6S1/2			0.633676619	0.000011931	-0.000000048		
	6P1/2			0.536882130	0.000006227	-0.000000021		
	6P3/2			0.460338906	0.000006730	-0.000000052		
5S1/2	-- (2)	38.779472	-156.902007	1.166279296	0.000104467		-0.005052307	0.000208021
	5P1/2			1.004383235	0.000075750	-0.000007959		
	5P3/2			0.956807521	0.000086117	-0.000021721		
	5D3/2			0.924703767	0.000060885	-0.000008027		
	5D5/2			0.905754768	0.000032146	-0.000008100		
	6S1/2			0.588591799	0.000012329	-0.000005976		
	6P1/2			0.510823651	0.000005861	-0.000001331		
	6P3/2			0.441327399	0.000004079	-0.000001265		
5P1/2	-- (2)	34.572073	-146.941093	1.107188548	0.000170118		-0.000709699	0.000042122
	5P3/2			0.995137342	0.000017590	-0.000000466		
	5D3/2			0.855756722	0.000150603	-0.000034089		
	5D5/2			0.905462455	0.000012651	-0.000001257		
	6S1/2			0.592056219	0.000019847	-0.000003101		
	6P1/2			0.502619285	0.000010220	-0.000003302		
	6P3/2			0.441782680	0.000002389	-0.000000216		
5P3/2	-- (4)	26.272842	-129.231761	0.966236610	0.000082019		-0.000037002	0.000005319
	5D3/2			0.881783145	0.000032690	-0.000002468		
	5D5/2			0.829900642	0.000059805	-0.000012832		
	6S1/2			0.582413970	0.000028955	-0.000004575		
	6P1/2			0.504831598	0.000004936	-0.000000480		
	6P3/2			0.435206880	0.000005795	-0.000001128		
5D3/2	-- (4)	18.715232	-107.321317	0.820347805	0.000072337		-0.000000526	0.000000098
	5D5/2			0.815716111	0.000013233	-0.000000003		
	6S1/2			0.565311812	0.000007189	-0.000000163		
	6P1/2			0.487085076	0.000014502	-0.000001542		
	6P3/2			0.430836975	0.000002735	-0.000000138		
5D5/2	-- (6)	17.280531	-103.362899	0.797409692	0.000058816		-0.000000091	0.000000026
	6S1/2			0.560717903	0.000009449	-0.000000131		
	6P1/2			0.491270145	0.000003889	-0.000000063		
	6P3/2			0.426976201	0.000006795	-0.000000595		
6S1/2	-- (2)	7.201040	-60.210826	0.482372724	0.000006156		-0.000795301	0.000032741
	6P1/2			0.388433203	0.000007188	-0.000001029		
	6P3/2			0.356279795	0.000005541	-0.000001561		
6P1/2	-- (2)	4.875698	-49.790311	0.402874973	0.000006972		-0.000082814	0.000004914
	6P3/2			0.349961425	0.000000664	-0.000000015		
6P3/2	-- (4)	3.205594	-41.858907	0.330521287	0.000002820		-0.000003666	0.000000527
ETOT	-23578.04668	27945.21613	-60123.17043	8576.03071	32.885188034	-3.486046487	-5.779598155	0.257374819

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM 7S1 Z=87 A=223 R=1.37516E-04 A.U.							
1S1/2 -- (2)	5403.967877	-9669.358368	64.626433988	9.906046555		-2.504244225	0.113591272
2S1/2			20.264700802	0.544591738	-0.066292811		
2P1/2			25.034154626	1.125991621	-0.144768559		
2P3/2			20.311869912	0.488433960	-0.141143592		
3S1/2			8.476757901	0.119800592	-0.015588703		
3P1/2			9.440377442	0.227074839	-0.028753017		
3P3/2			8.141499489	0.109141116	-0.032514097		
3D3/2			8.290424528	0.004891309	-0.000560374		
3D5/2			7.933239295	0.001930463	-0.000618449		
4S1/2			3.899399665	0.031395365	-0.004144718		
4P1/2			4.072317811	0.056537222	-0.007134760		
4P3/2			3.587357073	0.027290283	-0.008185756		
4D3/2			3.463532129	0.001359810	-0.000156401		
4D5/2			3.337463617	0.000535497	-0.000173164		
4F5/2			3.042914360	0.000003958	-0.000000416		
4F7/2			2.995249737	0.000001516	-0.000000499		
5S1/2			1.771542342	0.007429876	-0.000984375		
5P1/2			1.726087413	0.012265223	-0.001546585		
5P3/2			1.532686914	0.005809342	-0.001745285		
5D3/2			1.299632504	0.000228411	-0.000026292		
5D5/2			1.252361036	0.000088636	-0.000028715		
6S1/2			0.724536196	0.001262011	-0.000167331		
6P1/2			0.626099001	0.001637652	-0.000206468		
6P3/2			0.539243465	0.000694339	-0.000208659		
7S1/2			0.216450219	0.000087555	-0.000011610		
2S1/2 -- (2)	1322.551314	-2417.852041	14.773700297	0.212911663		-0.379889654	0.016163212
2P1/2			14.740858664	0.065085518	-0.000087845		
2P3/2			13.480745672	0.091692624	-0.002922707		
3S1/2			7.003127642	0.025544729	-0.006172436		
3P1/2			7.693486234	0.043574585	-0.006731901		
3P3/2			6.997575960	0.027650770	-0.003188793		
3D3/2			7.774364843	0.025261876	-0.003460140		
3D5/2			7.506128053	0.010836110	-0.003406961		
4S1/2			3.528920984	0.006636454	-0.001689244		
4P1/2			3.642692622	0.011246641	-0.001787860		
4P3/2			3.309402741	0.007129138	-0.000924819		
4D3/2			3.342083407	0.005106747	-0.000739468		
4D5/2			3.237651855	0.002304406	-0.000740975		
4F5/2			3.039097107	0.000321397	-0.000042157		
4F7/2			2.991870695	0.000115303	-0.000040995		
5S1/2			1.684627602	0.001566739	-0.000402888		
5P1/2			1.633097647	0.002455078	-0.000392432		
5P3/2			1.473864554	0.001525141	-0.000202473		
5D3/2			1.279840401	0.000807677	-0.000118234		
5D5/2			1.236346978	0.000363638	-0.000117189		
6S1/2			0.709799990	0.000265977	-0.000068540		
6P1/2			0.613688197	0.000328169	-0.000052510		
6P3/2			0.532220391	0.000182439	-0.000024320		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	7S1	Z=87	A=223 R=1.37516E-04 A.U.				
2P1/2 --	7S1/2 (2)	1321.222361	-2416.517411	0.215428103 18.306712879	0.000018452 0.487491687	-0.000004756	
	2P3/2			15.844024611	0.058123715	-0.000190912	0.003322456
	3S1/2			7.461774885	0.017401535	-0.001209214	
	3P1/2			7.691201902	0.040613061	-0.006017698	
	3P3/2			7.304629594	0.014166870	-0.000378235	
	3D3/2			7.787744623	0.074497339	-0.017734266	
	3D5/2			7.713475039	0.062203322	-0.000521925	
	4S1/2			3.637270394	0.004504273	-0.000349585	
	4P1/2			3.653386157	0.009784357	-0.001591409	
	4P3/2			3.382402959	0.003540730	-0.000111685	
	4D3/2			3.348018050	0.016057852	-0.003936775	
	4D5/2			3.283835217	0.000557373	-0.000124285	
	4F5/2			3.039951922	0.000373579	-0.000078369	
	4F7/2			2.993723187	0.000020607	-0.000007855	
	5S1/2			1.709693120	0.001062428	-0.000084477	
	5P1/2			1.635897026	0.002107085	-0.000349199	
	5P3/2			1.489243888	0.000753297	-0.000024581	
	5D3/2			1.280890872	0.002572252	-0.000634125	
	5D5/2			1.243689626	0.000090896	-0.000020012	
	6S1/2			0.714037201	0.000180329	-0.000014412	
	6P1/2			0.614073849	0.000280944	-0.000046723	
	6P3/2			0.534055131	0.000090024	-0.000002956	
	7S1/2			0.215721884	0.000012510	-0.000001000	
2P3/2 --	(4)	891.714715	-1858.303499	14.786893477	0.215553562	-0.002639142	0.000397561
	3S1/2			7.238521632	0.021500167	-0.001704478	
	3P1/2			7.775817596	0.013124751	-0.000614502	
	3P3/2			6.934329970	0.026539045	-0.002475661	
	3D3/2			7.853039502	0.022254215	-0.002158239	
	3D5/2			7.439086776	0.036733719	-0.010443276	
	4S1/2			3.580589669	0.005257141	-0.000446803	
	4P1/2			3.661706612	0.003173839	-0.000171417	
	4P3/2			3.298282673	0.006276483	-0.000649433	
	4D3/2			3.359953612	0.004629504	-0.000452850	
	4D5/2			3.226439560	0.007509600	-0.002207018	
	4F5/2			3.039367533	0.000261245	-0.000025440	
	4F7/2			2.991133920	0.000225206	-0.000072884	
	5S1/2			1.696366401	0.001224775	-0.000105865	
	5P1/2			1.637151874	0.000684438	-0.000038109	
	5P3/2			1.471689580	0.001319632	-0.000139392	
	5D3/2			1.282725286	0.000737455	-0.000072286	
	5D5/2			1.234661027	0.001176149	-0.000347621	
	6S1/2			0.711776639	0.000207343	-0.000017987	
	6P1/2			0.614227728	0.000091284	-0.000005112	
	6P3/2			0.531964497	0.000157368	-0.000016684	
	7S1/2			0.215565080	0.000014379	-0.000001248	
3S1/2 --	(2)	422.242511	-884.156509	5.618595781	0.013699100	-0.088234533	0.003719416
	3P1/2			5.184475393	0.004691015	-0.000059874	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	751	Z=87 A=223 R=1.37516E-04 A.U.					
3P3/2			4.887326953	0.006732950	-0.000630568		
3D3/2			5.605555727	0.004232530	-0.000141513		
3D5/2			5.514522786	0.005520268	-0.000175867		
4S1/2			3.083247706	0.002267117	-0.000802702		
4P1/2			3.181824557	0.003140642	-0.000545153		
4P3/2			2.924282766	0.001941961	-0.000240220		
4D3/2			2.971764199	0.001227520	-0.000119329		
4D5/2			2.899758564	0.001199290	-0.000101286		
4F5/2			2.922950981	0.001127050	-0.000158197		
4F7/2			2.883890640	0.000514345	-0.000154619		
5S1/2			1.585480668	0.000532528	-0.000195303		
5P1/2			1.536054565	0.000711498	-0.000127410		
5P3/2			1.394523499	0.000433877	-0.000057329		
5D3/2			1.221640636	0.000210887	-0.000022257		
5D5/2			1.184013151	0.000188611	-0.000018797		
6S1/2			0.693150619	0.000090262	-0.000033289		
6P1/2			0.600797686	0.000095597	-0.000017201		
6P3/2			0.522788911	0.000052239	-0.000006973		
7S1/2			0.214274717	0.000006260	-0.000002310		
3P1/2 -- (2)	417.190508	-877.227312	5.987507428	0.027313103		-0.013988572	0.000850354
3P3/2			5.372598519	0.003036839	-0.000032825		
3D3/2			5.490459721	0.009637271	-0.000741242		
3D5/2			5.794400719	0.004113108	-0.000033241		
4S1/2			3.187750923	0.001923468	-0.000232514		
4P1/2			3.130141242	0.003229382	-0.000742755		
4P3/2			2.973599175	0.000974322	-0.000055234		
4D3/2			2.991754830	0.002789515	-0.000415148		
4D5/2			2.934008491	0.000811123	-0.000027816		
4F5/2			2.914685372	0.001917955	-0.000423059		
4F7/2			2.909372189	0.000211874	-0.000044870		
5S1/2			1.606583910	0.000440907	-0.000057395		
5P1/2			1.528084756	0.000685082	-0.000166844		
5P3/2			1.404113685	0.000210556	-0.000013398		
5D3/2			1.225027455	0.000487074	-0.000078308		
5D5/2			1.189265384	0.000124341	-0.000005104		
6S1/2			0.696628738	0.000074385	-0.000009817		
6P1/2			0.599800736	0.000091086	-0.000022380		
6P3/2			0.523918414	0.000025218	-0.000001634		
7S1/2			0.214515076	0.000005156	-0.000000682		
3P3/2 -- (4)	309.494805	-730.251258	5.180177265	0.013139966		-0.000729174	0.000107912
3D3/2			5.517117180	0.002943882	-0.000017856		
3D5/2			5.260531363	0.007226863	-0.000140410		
4S1/2			3.125128261	0.002813460	-0.000361760		
4P1/2			3.166560019	0.001238203	-0.000093624		
4P3/2			2.875482179	0.002189465	-0.0000316306		
4D3/2			2.949443947	0.001094438	-0.000103209		
4D5/2			2.870249212	0.002362541	-0.000362105		
4F5/2			2.909243489	0.000975729	-0.000098210		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	7S1	Z=87 A=223 R=1.37516E-04 A.U.					
			2.850194592	0.000939499	-0.000278100		
			1.592674780	0.000609392	-0.000082011		
			1.532629763	0.000260998	-0.000022059		
			1.385356165	0.000452731	-0.000069998		
			1.218219885	0.000183471	-0.000018234		
			1.179552273	0.000380341	-0.000063754		
			0.694291988	0.000101796	-0.000013822		
			0.600038008	0.000034675	-0.000002985		
			0.521715294	0.000053832	-0.000008409		
			0.214353189	0.000007047	-0.000000958		
303/2 -- (4)	303.533019	-721.990097	6.024111937	0.022418291		-0.000012544	0.000002414
			5.986681726	0.004085363	-0.000000309		
			3.220856997	0.001058058	-0.000027265		
			3.225487598	0.002127993	-0.000155929		
			2.990729128	0.000738721	-0.000018895		
			2.971675303	0.002532754	-0.000245998		
			2.961362021	0.000830186	-0.000012077		
			2.895878922	0.004332083	-0.001072839		
			2.919504130	0.000146407	-0.000017357		
			1.613436001	0.000240730	-0.000008047		
			1.545473836	0.000423474	-0.000033152		
			1.407437938	0.000154073	-0.000004728		
			1.222862010	0.000386354	-0.000041123		
			1.193423812	0.000128842	-0.000002241		
			0.697761325	0.000040575	-0.000001423		
			0.602052236	0.000055719	-0.000004419		
			0.524309441	0.000018348	-0.000000580		
			0.214593373	0.000002812	-0.000000099		
3D5/2 -- (6)	282.309601	-690.703693	5.840755895	0.018586546		-0.000002209	0.000000642
			3.201299021	0.001237404	-0.000027378		
			3.232340101	0.000883782	-0.000013617		
			2.961722490	0.001442146	-0.000062061		
			3.017420912	0.000678192	-0.000013296		
			2.902969732	0.002238027	-0.000155795		
			2.949408134	0.000907845	-0.000067082		
			2.864544331	0.002701635	-0.0000751271		
			1.609032878	0.000274624	-0.000008054		
			1.545981105	0.000182847	-0.000003851		
			1.401812656	0.000287998	-0.000013908		
			1.228716252	0.000109675	-0.000002486		
			1.185252060	0.000335353	-0.000025703		
			0.697020003	0.000046078	-0.000001423		
			0.602100067	0.000024218	-0.000000537		
			0.523647273	0.000034050	-0.000001677		
			0.214542000	0.000003192	-0.000000099		
4S1/2 -- (2)	142.587272	-377.876792	2.559527272	0.001269208		-0.023432979	0.000985568
			2.276137420	0.000560610	-0.000027807		
			2.165586017	0.000764585	-0.000139207		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM	751	Z=87 A=223 R=1.37516E-04 A.U.					
4D3/2			2.316098504	0.000547311	-0.000050138		
4D5/2			2.280155786	0.000485631	-0.000056278		
4F5/2			2.351400388	0.000387338	-0.000033178		
4F7/2			2.333244683	0.000391264	-0.000033950		
5S1/2			1.429961048	0.000213547	-0.000093020		
5P1/2			1.400623782	0.000204793	-0.000040237		
5P3/2			1.281019709	0.000120198	-0.000022456		
5D3/2			1.136280578	0.000051155	-0.000005865		
5D5/2			1.103866111	0.000070343	-0.000005909		
6S1/2			0.668292398	0.000036209	-0.000016247		
6P1/2			0.583248035	0.000028808	-0.000005822		
6P3/2			0.509623101	0.000014866	-0.000002806		
7S1/2			0.212562342	0.000002511	-0.000001130		
4P1/2 -- (2)	137.143582	-368.701399	2.566893273	0.002347042		-0.003688432	0.000223279
4P3/2			2.314617186	0.000245327	-0.000005055		
4D3/2			2.177183966	0.001315760	-0.000225839		
4D5/2			2.331944121	0.000296057	-0.000009214		
4F5/2			2.308913825	0.000626178	-0.000081410		
4F7/2			2.354832062	0.000281583	-0.000009663		
5S1/2			1.455913288	0.000240782	-0.000035589		
5P1/2			1.374376427	0.000261183	-0.000075774		
5P3/2			1.289907842	0.000071889	-0.000005860		
5D3/2			1.130436168	0.000097893	-0.000015247		
5D5/2			1.106952368	0.000051345	-0.000001988		
6S1/2			0.671922711	0.000039148	-0.000006107		
6P1/2			0.580322883	0.000034412	-0.000010429		
6P3/2			0.510545864	0.000008753	-0.000000774		
7S1/2			0.212808288	0.000002701	-0.000000424		
4P3/2 -- (4)	104.079452	-317.682542	2.247539403	0.001139122		-0.000191464	0.000028212
4D3/2			2.243112536	0.000318193	-0.000010329		
4D5/2			2.121111886	0.000720603	-0.000063627		
4F5/2			2.254424412	0.000265069	-0.000012091		
4F7/2			2.209584115	0.000445812	-0.000035384		
5S1/2			1.430620439	0.000370696	-0.000056714		
5P1/2			1.385115529	0.000114330	-0.000010548		
5P3/2			1.258047290	0.000173806	-0.000031394		
5D3/2			1.125315732	0.000043063	-0.000003740		
5D5/2			1.090628077	0.000105654	-0.000009620		
6S1/2			0.667985540	0.000057271	-0.000009121		
6P1/2			0.581188463	0.000014920	-0.000001502		
6P3/2			0.507066542	0.000020440	-0.000003888		
7S1/2			0.212537630	0.000003930	-0.000000629		
4D3/2 -- (4)	95.422901	-301.531467	2.254496687	0.001534198		-0.000003667	0.000000703
4D5/2			2.245983346	0.000280783	-0.000000045		
4F5/2			2.152871579	0.000804588	-0.000091229		
4F7/2			2.255863328	0.000236106	-0.000001787		
5S1/2			1.437450233	0.000120957	-0.000004627		
5P1/2			1.375250823	0.000273404	-0.000030466		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FRANCIUM 7S1 Z=87 A=223 R=1.37516E-04 A.U.							
5P1/2 -- (2)	36.360324	-153.321464	0.209219046	0.000001010	-0.000000504		
5P3/2			1.138080223	0.000185949		-0.000811136	0.000049053
5D3/2			1.022432520	0.000018956	-0.000000540		
5D5/2			0.885494195	0.000166578	-0.000037652		
6S1/2			0.937945084	0.000014180	-0.000001400		
6P1/2			0.622066993	0.000023175	-0.000003642		
6P3/2			0.540393763	0.000012887	-0.000004225		
7S1/2			0.484801488	0.000003135	-0.000000295		
5P3/2 -- (4)	27.909021	-134.536937	0.209442068	0.000001541	-0.000000250		
5D3/2			0.992258729	0.000089354		-0.000041225	0.000006068
5D5/2			0.912000809	0.000035637	-0.000002647		
6S1/2			0.858604690	0.000065728	-0.000013897		
6P1/2			0.611426633	0.000034235	-0.000005438		
6P3/2			0.542780612	0.000006284	-0.000000619		
7S1/2			0.476713730	0.000007670	-0.000001525		
5D3/2 -- (4)	20.371479	-113.102431	0.208772026	0.000002194	-0.000000360		
5D5/2			0.853151967	0.000081734		-0.000000622	0.000000119
6S1/2			0.848631335	0.000014958	-0.000000003		
6P1/2			0.594650876	0.000008622	-0.000000218		
6P3/2			0.523853428	0.000018547	-0.000002038		
7S1/2			0.472142480	0.000003650	-0.000000190		
5D5/2 -- (6)	18.833094	-108.979174	0.207776212	0.000000564	-0.000000021		
6S1/2			0.829886541	0.000066593		-0.000000108	0.000000031
6P1/2			0.589855438	0.000011182	-0.000000179		
6P3/2			0.528285108	0.000004881	-0.000000085		
7S1/2			0.467735415	0.000009011	-0.000000819		
6S1/2 -- (2)	8.240964	-64.589858	0.207503664	0.000000679	-0.000000019		
6P1/2			0.509215051	0.000007347		-0.0000945830	0.000039753
6P3/2			0.416223552	0.000008619	-0.000001221		
7S1/2			0.387439749	0.000007245	-0.000002035		
6P1/2 -- (2)	5.939041	-54.892118	0.199544067	0.000000358	-0.000000166		
6P3/2			0.437745619	0.000009008		-0.000108588	0.000006565
7S1/2			0.384870695	0.000000879	-0.000000022		
6P3/2 -- (4)	4.095414	-47.056903	0.198427156	0.000000779	-0.000000116		
7S1/2			0.367327391	0.000003880		-0.0000004938	0.000000727
7S1/2 -- (1)	0.662731	-18.939070	0.194442542	0.000001000	-0.000000136		
ETOT	-24283.22327	28924.61554	-62026.51636	8793.90180	34.292280121	-3.633293465	-6.163793538
RADIUM 7S2 Z=88 A=226 R=1.38130E-04 A.U.							
1S1/2 -- (2)	5589.141329	-9967.753875	65.720842473	10.295533968		-2.663098759	0.123414087
2S1/2			20.629399666	0.568082885	-0.069288318		
2P1/2			25.529573786	1.174049955	-0.149947978		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	7S2	Z=88 A=226 R=1.38130E-04 A.U.					
2P3/2			20.585281842	0.505815370	-0.146156553		
3S1/2			8.630272604	0.125173766	-0.016317602		
3P1/2			9.623701365	0.236946009	-0.029775435		
3P3/2			8.263204510	0.113541467	-0.033821406		
3D3/2			8.415768934	0.005074491	-0.000578388		
3D5/2			8.044325684	0.002000469	-0.000640761		
4S1/2			3.975917562	0.032960117	-0.004359230		
4P1/2			4.158235693	0.059311137	-0.007426366		
4P3/2			3.650883104	0.028581671	-0.008572386		
4D3/2			3.530047743	0.001425328	-0.000163091		
4D5/2			3.398951941	0.000560941	-0.000181364		
4F5/2			3.111434641	0.000004220	-0.000000441		
4F7/2			3.061937825	0.000001619	-0.000000533		
5S1/2			1.818659294	0.007937051	-0.001053520		
5P1/2			1.777913189	0.013150543	-0.001645167		
5P3/2			1.575953554	0.006236261	-0.001873430		
5D3/2			1.351101838	0.000251102	-0.000028755		
5D5/2			1.302341057	0.000097610	-0.000031619		
6S1/2			0.764426988	0.001445160	-0.000191976		
6P1/2			0.673650742	0.001961627	-0.000245362		
6P3/2			0.584878408	0.000854656	-0.000256826		
7S1/2			0.256985422	0.000139949	-0.000018593		
2S1/2 -- (2)	1372.654892	-2498.052260	15.027972060	0.223295791		-0.407571126	0.017700951
2P1/2			15.006877045	0.068269930	-0.000089616		
2P3/2			13.684649367	0.095449037	-0.003176037		
3S1/2			7.122430783	0.026829400	-0.006475483		
3P1/2			7.830747858	0.045850510	-0.007073874		
3P3/2			7.102657987	0.028633503	-0.003278814		
3D3/2			7.893418561	0.026338674	-0.003604903		
3D5/2			7.614124202	0.011274084	-0.003548524		
4S1/2			3.594914494	0.007003384	-0.001780910		
4P1/2			3.714675837	0.011897171	-0.001888521		
4P3/2			3.367027073	0.007438202	-0.000959447		
4D3/2			3.405819846	0.005378161	-0.000778180		
4D5/2			3.297330561	0.002423091	-0.000780241		
4F5/2			3.107488514	0.000342062	-0.000044832		
4F7/2			3.058453934	0.000122613	-0.000043602		
5S1/2			1.727706675	0.001682332	-0.000432242		
5P1/2			1.679780953	0.002654444	-0.000423691		
5P3/2			1.514387123	0.001631391	-0.000215463		
5D3/2			1.329879273	0.000891099	-0.000130374		
5D5/2			1.285210394	0.000401602	-0.000129620		
6S1/2			0.747897436	0.000306144	-0.000078829		
6P1/2			0.659018670	0.000396419	-0.000063342		
6P3/2			0.576450374	0.000223781	-0.000029686		
7S1/2			0.255385151	0.000029644	-0.000007636		
2P1/2 -- (2)	1371.462303	-2496.925128	18.647641941	0.511605703		-0.059413829	0.003746140
2P3/2			16.087503823	0.060184859	-0.000209347		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	752	Z=88 A=226 R=1.38130E-04 A.U.					
3S1/2			7.593111752	0.018279506	-0.001265562		
3P1/2			7.829116159	0.042719060	-0.006316825		
3P3/2			7.416468389	0.014740424	-0.000392953		
3D3/2			7.908121302	0.077556529	-0.018461493		
3D5/2			7.823753092	0.062279765	-0.000542272		
4S1/2			3.706681293	0.064754954	-0.000367821		
4P1/2			3.725886154	0.010349351	-0.001680244		
4P3/2			3.442115119	0.003709947	-0.000116842		
4D3/2			3.412148685	0.016890885	-0.004140844		
4D5/2			3.344539903	0.000582762	-0.000130525		
4F5/2			3.108381749	0.000396643	-0.000083195		
4F7/2			3.060369415	0.000021842	-0.000008331		
5S1/2			1.754014017	0.001141249	-0.000090468		
5P1/2			1.682777464	0.002277833	-0.000376897		
5P3/2			1.530598838	0.000809062	-0.000026370		
5D3/2			1.331050897	0.002835334	-0.000699026		
5D5/2			1.293095567	0.000099879	-0.000022083		
6S1/2			0.752663804	0.000207641	-0.000016548		
6P1/2			0.659480339	0.000339283	-0.000056346		
6P3/2			0.578667741	0.000110866	-0.000003637		
7S1/2			0.255846381	0.000020106	-0.000001604		
2P3/2 -- (4)	914.903807	-1904.527399	14.980131100	0.223600385		-0.002829057	0.000436562
3S1/2			7.357847240	0.022545091	-0.001801455		
3P1/2			7.907453145	0.013743507	-0.000645477		
3P3/2			7.033359428	0.027613537	-0.002578889		
3D3/2			7.969267092	0.023188349	-0.002244816		
3D5/2			7.542298205	0.038232321	-0.010869908		
4S1/2			3.646659829	0.005532115	-0.000473388		
4P1/2			3.732409129	0.003339391	-0.000180882		
4P3/2			3.354435681	0.006570866	-0.000680845		
4D3/2			3.423271906	0.004863689	-0.000474830		
4D5/2			3.285048212	0.007886762	-0.002318383		
4F5/2			3.107715652	0.000280254	-0.000027266		
4F7/2			3.057633605	0.000241402	-0.000078146		
5S1/2			1.739654378	0.001310952	-0.000114082		
5P1/2			1.683640200	0.000735899	-0.000041105		
5P3/2			1.511845832	0.001415658	-0.000149786		
5D3/2			1.332832742	0.000811506	-0.000079390		
5D5/2			1.283266853	0.001296844	-0.000383429		
6S1/2			0.750052880	0.000237858	-0.000020776		
6P1/2			0.659592206	0.000109641	-0.000006161		
6P3/2			0.576107320	0.000193543	-0.000020558		
7S1/2			0.255593594	0.000023022	-0.000002012		
3S1/2 -- (2)	438.391083	-912.778495	5.713230224	0.014405313		-0.094914585	0.004083535
3P1/2			5.274260117	0.004926324	-0.000061366		
3P3/2			4.963541971	0.007052480	-0.000681411		
3D3/2			5.695138291	0.004435868	-0.000150186		
3D5/2			5.600143303	0.005768213	-0.000187319		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	752	Z=88 A=226 R=1.38130E-04 A.U.					
4S1/2			3.138907747	0.002394814	-0.000847141		
4P1/2			3.241998624	0.003333761	-0.000578133		
4P3/2			2.973647027	0.002017313	-0.000250373		
4D3/2			3.026858829	0.001290720	-0.000125367		
4D5/2			2.952248296	0.001263054	-0.000106072		
4F5/2			2.987653865	0.001199745	-0.000168441		
4F7/2			2.947204908	0.000547362	-0.000164644		
5S1/2			1.624510782	0.000572331	-0.000209745		
5P1/2			1.578067070	0.000771903	-0.000138119		
5P3/2			1.431346319	0.000462384	-0.000061267		
5D3/2			1.267494169	0.000232656	-0.000024568		
5D5/2			1.229097478	0.000208629	-0.000020737		
6S1/2			0.729327930	0.000103978	-0.000038326		
6P1/2			0.643927527	0.000115892	-0.000020840		
6P3/2			0.565135060	0.000063865	-0.000008552		
7S1/2			0.253589982	0.000010066	-0.000003713		
3P1/2 -- (2)	433.268257	-905.790449	6.092630363	0.028743124		-0.015520755	0.000961093
3P3/2			5.457585827	0.003144525	-0.000036254		
3D3/2			5.579160788	0.010130861	-0.000793129		
3D5/2			5.885851996	0.004293622	-0.000035653		
4S1/2			3.246242155	0.002028252	-0.000244796		
4P1/2			3.189330289	0.003418326	-0.000785420		
4P3/2			3.024452830	0.001016059	-0.000058059		
4D3/2			3.047594806	0.002920179	-0.000433313		
4D5/2			2.987559169	0.000856289	-0.000029236		
4F5/2			2.979355030	0.002041563	-0.000450483		
4F7/2			2.973619894	0.000225267	-0.000047776		
5S1/2			1.646553348	0.000473077	-0.000061524		
5P1/2			1.569810400	0.000741037	-0.000180357		
5P3/2			1.441464455	0.000225217	-0.000014447		
5D3/2			1.271177952	0.000535270	-0.000085947		
5D5/2			1.234779672	0.000137824	-0.000005647		
6S1/2			0.733218654	0.000085537	-0.000011284		
6P1/2			0.642777940	0.000110051	-0.000027032		
6P3/2			0.566500389	0.000030935	-0.000002022		
7S1/2			0.253965038	0.000008275	-0.000001094		
3P3/2 -- (4)	318.583426	-749.663341	5.254400845	0.013702831		-0.000785325	0.000119003
3D3/2			5.597746372	0.003068187	-0.000018231		
3D5/2			5.335509779	0.007529005	-0.000145752		
4S1/2			3.180271535	0.002980994	-0.000385070		
4P1/2			3.224654988	0.001310693	-0.000099371		
4P3/2			2.922759944	0.002298527	-0.000332514		
4D3/2			3.002658632	0.001157441	-0.000109264		
4D5/2			2.920804894	0.002489476	-0.000382385		
4F5/2			2.972582009	0.001037907	-0.000104448		
4F7/2			2.911519025	0.000999913	-0.000295832		
5S1/2			1.631653666	0.000655606	-0.000088639		
5P1/2			1.574125474	0.000281996	-0.000023916		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM 752 Z=88 A=226 R=1.38130E-04 A.U.							
5P3/2			1.421536462	0.000486950	-0.000075432		
5D3/2			1.263607525	0.000203330	-0.000020237		
5D5/2			1.224104535	0.000420877	-0.000070794		
6S1/2			0.730536435	0.000117298	-0.000016005		
6P1/2			0.643337189	0.000041838	-0.000003618		
6P3/2			0.563818613	0.000066370	-0.000010392		
7S1/2			0.253705722	0.000011330	-0.000001548		
3D3/2 -- (4)	312.549602	-741.332294	6.114489415	0.023399025		-0.000013921	0.000002745
3D5/2			6.073819593	0.004256621	-0.000000339		
4S1/2			3.278569851	0.001113759	-0.000028787		
4P1/2			3.285464467	0.002248552	-0.000165809		
4P3/2			3.040720197	0.000775244	-0.000019857		
4D3/2			3.025874987	0.002666544	-0.000259733		
4D5/2			3.014410658	0.000873550	-0.000012740		
4F5/2			2.959154533	0.004614031	-0.001142854		
4F7/2			2.983530551	0.000156222	-0.000018495		
5S1/2			1.653324345	0.000257693	-0.000008657		
5P1/2			1.587664506	0.000456578	-0.000035972		
5P3/2			1.444680413	0.000165694	-0.000005102		
5D3/2			1.268678178	0.000425766	-0.000045506		
5D5/2			1.239061290	0.000142326	-0.000002489		
6S1/2			0.734415947	0.000046544	-0.000001643		
6P1/2			0.645355674	0.000067059	-0.000005355		
6P3/2			0.566933339	0.000022620	-0.000000719		
7S1/2			0.254080482	0.000004502	-0.000000160		
3D5/2 -- (6)	290.192483	-708.422952	5.923240110	0.019363276		-0.000002431	0.000000725
4S1/2			3.258046582	0.001301237	-0.000028903		
4P1/2			3.291899402	0.000930436	-0.000014384		
4P3/2			3.010689188	0.001511794	-0.000065216		
4D3/2			3.072174725	0.000713441	-0.000014046		
4D5/2			2.954265253	0.002352048	-0.000164282		
4F5/2			3.014292043	0.000967341	-0.000071412		
4F7/2			2.926451301	0.002877051	-0.000080098		
5S1/2			1.648625033	0.000293565	-0.000008664		
5P1/2			1.588058859	0.000196586	-0.000004169		
5P3/2			1.438710987	0.000309193	-0.000014987		
5D3/2			1.274845060	0.000116410	-0.000002758		
5D5/2			1.230235062	0.000369712	-0.000028472		
6S1/2			0.733568091	0.000052773	-0.000001643		
6P1/2			0.645390259	0.000029077	-0.000000651		
6P3/2			0.566128165	0.000041889	-0.000002074		
7S1/2			0.253998485	0.000009101	-0.000000160		
4S1/2 -- (2)	148.596674	-390.460403	2.606388137	0.001343597		-0.025334531	0.001087484
4P1/2			2.318993082	0.000589968	-0.000028712		
4P3/2			2.203835745	0.000812290	-0.000150159		
4D3/2			2.359092175	0.000578555	-0.000053064		
4D5/2			2.321837822	0.000512093	-0.000059735		
4F5/2			2.401346466	0.000410222	-0.000034918		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	7S2	Z=88 A=226 R=1.38130E-04 A.U.					
4F7/2			2.382664572	0.000416089	-0.000035775		
5S1/2			1.463633859	0.000230254	-0.000100403		
5P1/2			1.437061010	0.000224125	-0.000044008		
5P3/2			1.313284713	0.000128805	-0.000024449		
5D3/2			1.176480541	0.000056691	-0.000006533		
5D5/2			1.143519071	0.000077958	-0.000006595		
6S1/2			0.701804174	0.000041837	-0.000018799		
6P1/2			0.623535369	0.000035259	-0.000007126		
6P3/2			0.549452462	0.000018280	-0.000003502		
7S1/2			0.250946365	0.000004049	-0.000001826		
4P1/2 -- (2)	143.064105	-381.198800	2.616139243	0.002489055		-0.004117002	0.000253841
4P3/2			2.356193998	0.000256016	-0.000005643		
4D3/2			2.218556936	0.001396982	-0.000240775		
4D5/2			2.375439596	0.000311528	-0.000009856		
4F5/2			2.358878884	0.000664007	-0.000085855		
4F7/2			2.405641555	0.000300021	-0.000010215		
5S1/2			1.490675131	0.000258520	-0.000038253		
5P1/2			1.409971177	0.000283427	-0.000082413		
5P3/2			1.322712471	0.000076929	-0.000006375		
5D3/2			1.170399201	0.000108435	-0.000017024		
5D5/2			1.146911582	0.000056868	-0.000002231		
6S1/2			0.705842377	0.000045011	-0.000007039		
6P1/2			0.620189147	0.000041694	-0.000012676		
6P3/2			0.550570249	0.000010752	-0.000000969		
7S1/2			0.251326871	0.000004331	-0.000000682		
4P3/2 -- (4)	107.796478	-327.042555	2.285368558	0.001199074		-0.000207647	0.000031325
4D3/2			2.283060952	0.000333798	-0.000010637		
4D5/2			2.158446665	0.000758166	-0.000066212		
4F5/2			2.300091742	0.000279340	-0.000012504		
4F7/2			2.254362325	0.000472056	-0.000036647		
5S1/2			1.463844332	0.000401671	-0.000061620		
5P1/2			1.420466460	0.000124598	-0.000011533		
5P3/2			1.289180146	0.000187731	-0.000034070		
5D3/2			1.164550033	0.000048152	-0.000004224		
5D5/2			1.129213530	0.000118000	-0.000010872		
6S1/2			0.701374478	0.000066271	-0.000010594		
6P1/2			0.621078458	0.000018127	-0.000001836		
6P3/2			0.546383666	0.000025293	-0.000004841		
7S1/2			0.250898730	0.000006337	-0.000001019		
4D3/2 -- (4)	99.071206	-310.856696	2.296888138	0.001622040		-0.000004113	0.000000808
4D5/2			2.287608246	0.000296225	-0.000000050		
4F5/2			2.199032578	0.000848258	-0.000094517		
4F7/2			2.303763379	0.000251481	-0.000001862		
5S1/2			1.471501117	0.000130179	-0.000005023		
5P1/2			1.410772996	0.000296754	-0.000033238		
5P3/2			1.306613678	0.000074222	-0.000003198		
5D3/2			1.149362266	0.000164964	-0.000019626		
5D5/2			1.134852338	0.000050784	-0.000001016		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM	7S2	Z=88 A=226 R=1.38130E-04 A.U.					
	6S1/2		0.702589868	0.000022251	-0.000001087		
	6P1/2		0.620082520	0.000039722	-0.000004646		
	6P3/2		0.548428576	0.000009881	-0.000000473		
	7S1/2		0.251013901	0.000002138	-0.000000108		
4D5/2 -- (6)	92.320022	-299.255605	2.240691775	0.001340266		-0.000000717	0.000000213
	4F5/2		2.280432445	0.000232945	-0.000005030		
	4F7/2		2.186289118	0.000707661	-0.000059219		
	5S1/2		1.462845355	0.000152303	-0.000004923		
	5P1/2		1.416355264	0.000089732	-0.000002046		
	5P3/2		1.295467010	0.000165207	-0.000012659		
	5D3/2		1.162147309	0.000043709	-0.000001174		
	5D5/2		1.119501415	0.000143369	-0.000012275		
	6S1/2		0.701179980	0.000025244	-0.000001080		
	6P1/2		0.620516005	0.000012636	-0.000000377		
	6P3/2		0.547069259	0.000021138	-0.000001693		
	7S1/2		0.250878998	0.000002418	-0.000000107		
4F5/2 -- (6)	78.717368	-273.806811	2.290588053	0.001593301		-0.000000092	0.000000001
	4F7/2		2.313069448	0.000254869	-0.000000001		
	5S1/2		1.468292357	0.000078489	-0.000000022		
	5P1/2		1.410741212	0.000107326	-0.000000386		
	5P3/2		1.303352904	0.000050823	-0.000000152		
	5D3/2		1.156171707	0.000097959	-0.000003560		
	5D5/2		1.131983258	0.000032759	-0.000000272		
	6S1/2		0.702184924	0.000013658	-0.000000077		
	6P1/2		0.620184068	0.000014870	-0.000000171		
	6P3/2		0.548056992	0.000006777	-0.000000045		
	7S1/2		0.250975104	0.000001315	-0.000000009		
4F7/2 -- (8)	76.452438	-269.450996	2.268546585	0.001460460		-0.000000000	0.000000000
	5S1/2		1.464007848	0.000097023	-0.000000014		
	5P1/2		1.415464578	0.000067860	-0.000000049		
	5P3/2		1.297126776	0.000085304	-0.000000357		
	5D3/2		1.161485750	0.000036664	-0.000000132		
	5D5/2		1.124950606	0.000085349	-0.000002324		
	6S1/2		0.701485014	0.000015975	-0.000000075		
	6P1/2		0.620490261	0.000009333	-0.000000036		
	6P3/2		0.547346768	0.000010873	-0.000000096		
	7S1/2		0.250908046	0.000001530	-0.000000008		
5S1/2 -- (2)	43.578303	-169.827166	1.225051634	0.000122738		-0.000122032	0.000262635
	5P1/2		1.057949567	0.000086468	-0.000008831		
	5P3/2		1.007221866	0.000103342	-0.000026183		
	5D3/2		0.987732238	0.000073697	-0.000009672		
	5D5/2		0.968616069	0.000039571	-0.000009858		
	6S1/2		0.647096213	0.000016976	-0.000008343		
	6P1/2		0.585352716	0.000009346	-0.000002144		
	6P3/2		0.519722395	0.000006668	-0.000002110		
	7S1/2		0.245888000	0.000001646	-0.000000828		
5P1/2 -- (2)	39.249351	-159.871851	1.169166393	0.000202887		-0.0000925612	0.000057010
	5P3/2		1.049834071	0.000020393	-0.000000627		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RADIUM 7S2 Z=88 A=226 R=1.38130E-04 A.U.							
5D3/2			0.914938966	0.000183596	-0.000041446		
5D5/2			0.969976580	0.000015803	-0.000001553		
6S1/2			0.651648332	0.000026825	-0.000004239		
6P1/2			0.574858088	0.000015795	-0.000005248		
6P3/2			0.520516511	0.000003891	-0.000000379		
7S1/2			0.246234878	0.000002477	-0.000000405		
5P3/2 -- (4)	29.601123	-139.947015	1.018312889	0.000097142		-0.000045836	0.000006907
5D3/2			0.941819064	0.000038699	-0.000002828		
5D5/2			0.886884273	0.000071940	-0.000014991		
6S1/2			0.639972995	0.000040133	-0.000006406		
6P1/2			0.577355195	0.000007777	-0.000000774		
6P3/2			0.511067395	0.000009609	-0.000001948		
7S1/2			0.245217010	0.000003555	-0.000000588		
5D3/2 -- (4)	22.076524	-118.934520	0.885393510	0.000091782		-0.000000732	0.000000144
5D5/2			0.880931894	0.000016794	-0.000000004		
6S1/2			0.623544848	0.000010224	-0.000000282		
6P1/2			0.557530167	0.000023011	-0.000002598		
6P3/2			0.506527907	0.000004602	-0.000000246		
7S1/2			0.243861022	0.000000926	-0.000000038		
5D5/2 -- (6)	20.428046	-114.631787	0.861714003	0.000074899		-0.000000126	0.000000037
6S1/2			0.618529944	0.000013103	-0.000000236		
6P1/2			0.562149893	0.000005959	-0.000000112		
6P3/2			0.501691135	0.000011305	-0.000001060		
7S1/2			0.243465200	0.000001101	-0.000000035		
6S1/2 -- (2)	9.353389	-69.051777	0.535585620	0.000008677		-0.001115557	0.000047851
6P1/2			0.442006014	0.000010112	-0.000001416		
6P3/2			0.413979898	0.000009060	-0.000002536		
7S1/2			0.232195433	0.000000608	-0.000000293		
6P1/2 -- (2)	7.039686	-59.791615	0.469032680	0.000011225		-0.000138457	0.000008526
6P3/2			0.414260613	0.000001096	-0.000000032		
7S1/2			0.231107259	0.000001314	-0.000000200		
6P3/2 -- (4)	4.958519	-51.642543	0.396919648	0.000004958		-0.000006296	0.000000949
7S1/2			0.226146266	0.000001726	-0.000000246		
7S1/2 -- (2)	1.045047	-22.787313	0.185696003	0.000000314		-0.000108043	0.000004634
ETOT	-25002.28014	29933.41860	-63976.67461	9015.28183	35.745718142	-3.784974987	-6.572351937
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
1S1/2 -- (2)	5780.726764	-10274.751410	66.833975760	10.697274214		-2.831937970	0.134020499
2S1/2			21.000613242	0.592439299	-0.072400565		
2P1/2			26.035902412	1.223810525	-0.155238934		
2P3/2			20.859885581	0.523568146	-0.151275674		
3S1/2			8.786129546	0.130745607	-0.017074702		
3P1/2			9.810295768	0.247148041	-0.030814949		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
3P3/2			8.385516654	0.118060752	-0.035163631		
3D3/2			8.541634242	0.005260501	-0.000596442		
3D5/2			8.155528389	0.002071433	-0.000663365		
4S1/2			4.053525876	0.034588735	-0.004582861		
4P1/2			4.245528735	0.062188961	-0.007724060		
4P3/2			3.714834998	0.029916980	-0.008972055		
4D3/2			3.596916017	0.001492555	-0.000169879		
4D5/2			3.460641713	0.000587031	-0.000189769		
4F5/2			3.179682244	0.000004489	-0.000000466		
4F7/2			3.128285250	0.000001724	-0.000000568		
5S1/2			1.866280474	0.008469152	-0.001126204		
5P1/2			1.830280127	0.014077205	-0.001746811		
5P3/2			1.619378405	0.006682918	-0.002007473		
5D3/2			1.401994730	0.000274724	-0.000031293		
5D5/2			1.351597980	0.000106947	-0.000034639		
6S1/2			0.802446391	0.001634318	-0.000217508		
6P1/2			0.716710450	0.002284857	-0.000283469		
6P3/2			0.623912056	0.001008603	-0.000303072		
6D3/2			0.365729186	0.000016466	-0.000301876		
7S1/2			0.281056132	0.000176083	-0.000023438		
2S1/2 -- (2)	1424.700952	-2580.830747	15.286328143	0.234148180		-0.437302406	0.019377548
2P1/2			15.277700511	0.071599891	-0.000091404		
2P3/2			13.890431829	0.099333974	-0.003450659		
3S1/2			7.243291426	0.028171659	-0.006791315		
3P1/2			7.970003940	0.048231341	-0.007430734		
3P3/2			7.208362119	0.029631815	-0.003368424		
3D3/2			8.013130405	0.027447148	-0.003753695		
3D5/2			7.722426910	0.011723081	-0.003693936		
4S1/2			3.661731104	0.007388142	-0.001876819		
4P1/2			3.787616019	0.012580193	-0.001993910		
4P3/2			3.425039128	0.007755023	-0.000994423		
4D3/2			3.469917229	0.005660377	-0.000818361		
4D5/2			3.357244979	0.002546092	-0.000821026		
4F5/2			3.175610366	0.000363333	-0.000047580		
4F7/2			3.124700064	0.000130122	-0.000046282		
5S1/2			1.771179602	0.001804525	-0.000463212		
5P1/2			1.726840228	0.002865715	-0.000456734		
5P3/2			1.555033852	0.001741754	-0.000228807		
5D3/2			1.379337866	0.000978781	-0.000143116		
5D5/2			1.333360162	0.000441393	-0.000142683		
6S1/2			0.784129579	0.000348023	-0.000089538		
6P1/2			0.699927966	0.000465699	-0.000074305		
6P3/2			0.614212461	0.000263132	-0.000034729		
6D3/2			0.364377391	0.000058154	-0.000008517		
7S1/2			0.279083274	0.000037493	-0.000009649		
2P1/2 -- (2)	1423.672264	-2579.944048	18.995212649	0.536835042		-0.065726038	0.004221356
2P3/2			16.333274435	0.062287851	-0.000229380		
3S1/2			7.726354511	0.019197467	-0.001324070		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89 A=227 R=1.38334E-04 A.U.					
3P1/2			7.969054215	0.044924403	-0.006628601		
3P3/2			7.529054731	0.015329025	-0.000408053		
3D3/2			8.029197405	0.080693976	-0.019207220		
3D5/2			7.934270781	0.002357129	-0.000563052		
4S1/2			3.777023510	0.005018061	-0.000386831		
4P1/2			3.799361526	0.010943391	-0.001773249		
4P3/2			3.502262565	0.003884897	-0.000122163		
4D3/2			3.476654927	0.017754221	-0.004352253		
4D5/2			3.405475384	0.000608746	-0.000136967		
4F5/2			3.176542079	0.000420271	-0.000088138		
4F7/2			3.126677046	0.000023102	-0.000008818		
5S1/2			1.798770372	0.001224646	-0.000096770		
5P1/2			1.730042588	0.002458959	-0.000406170		
5P3/2			1.572100423	0.000867420	-0.000028239		
5D3/2			1.380637524	0.003111182	-0.000767070		
5D5/2			1.341788313	0.000109194	-0.000024249		
6S1/2			0.789426816	0.000236143	-0.000018763		
6P1/2			0.700465349	0.000398508	-0.000066080		
6P3/2			0.616782816	0.000130899	-0.000004290		
6D3/2			0.364455463	0.000185198	-0.000045698		
7S1/2			0.279653532	0.000025439	-0.000002023		
2P3/2 -- (4)	938.449117	-1951.400887	15.173893683	0.231849625		-0.003030392	0.000478905
3S1/2			7.478461649	0.023635729	-0.001903591		
3P1/2			8.040561916	0.014387465	-0.000677747		
3P3/2			7.132724231	0.028717888	-0.002689072		
3D3/2			8.085911442	0.024148990	-0.002333584		
3D5/2			7.645627008	0.039770769	-0.011307932		
4S1/2			3.713477125	0.005819473	-0.000501395		
4P1/2			3.803924147	0.003512062	-0.000190766		
4P3/2			3.410887847	0.006875198	-0.000713353		
4D3/2			3.486885595	0.005106046	-0.000497504		
4D5/2			3.343833719	0.008276980	-0.002433633		
4F5/2			3.175788389	0.000300114	-0.000029170		
4F7/2			3.123790738	0.000258299	-0.000083636		
5S1/2			1.783312162	0.001401666	-0.000122806		
5P1/2			1.730457396	0.000790026	-0.000044265		
5P3/2			1.552093205	0.001516049	-0.000160671		
5D3/2			1.382336866	0.000888941	-0.000086795		
5D5/2			1.331136456	0.001423018	-0.000420882		
6S1/2			0.786448064	0.000269487	-0.000023701		
6P1/2			0.700512591	0.000128067	-0.000007221		
6P3/2			0.613775049	0.000228219	-0.000024286		
6D3/2			0.364555812	0.000052869	-0.000005164		
7S1/2			0.279332671	0.000029017	-0.000002554		
3S1/2 -- (2)	455.125411	-942.226343	5.809039251	0.015143791		-0.102101904	0.004481311
3P1/2			5.365200125	0.005172291	-0.000062880		
3P3/2			5.040357426	0.007386199	-0.000736328		
3D3/2			5.785440371	0.004647568	-0.000159446		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	6D1	Z=89 A=227 R=1.38334E-04 A.U.					
			5.686339045	0.006024561	-0.000199567		
			3.195195601	0.002528733	-0.000893649		
			3.302879911	0.003536998	-0.000612788		
			3.023305531	0.002093734	-0.000260831		
			3.082258809	0.001355839	-0.000131565		
			3.004968067	0.001329210	-0.000110959		
			3.052150194	0.001275220	-0.000179078		
			3.010255558	0.000581555	-0.000175050		
			1.663856852	0.000614421	-0.000224989		
			1.620356260	0.000836106	-0.000149490		
			1.468239463	0.000491744	-0.000065360		
			1.312745921	0.000255443	-0.000026985		
			1.273467709	0.000229653	-0.000022756		
			0.763668916	0.000118294	-0.000043575		
			0.682740520	0.000136617	-0.000024552		
			0.601191882	0.000074833	-0.000010056		
			0.360423053	0.000015337	-0.000001637		
			0.276883043	0.000012740	-0.000004697		
3P1/2 -- (2)	449.933965	-935.182896	6.199134631	0.030239749		-0.017217119	0.001085508
			5.543233376	0.003254065	-0.000040005		
			5.668553039	0.010647755	-0.000848886		
			5.977929966	0.004479666	-0.000038243		
			3.305426416	0.002137990	-0.000257618		
			3.249212042	0.003616880	-0.000830119		
			3.075635170	0.001058754	-0.000061001		
			3.103748502	0.003053473	-0.000451665		
			3.041355816	0.000903372	-0.000030703		
			3.043832359	0.002169833	-0.000478952		
			3.037597249	0.000239083	-0.000050790		
			1.686862128	0.000507046	-0.000065876		
			1.611812016	0.000800382	-0.000194655		
			1.478900209	0.000240434	-0.000015551		
			1.316734094	0.000585321	-0.000093848		
			1.279586843	0.000152045	-0.000006217		
			0.767968746	0.000097146	-0.000012808		
			0.681450834	0.000129313	-0.000031751		
			0.602774899	0.000036376	-0.000002400		
			0.360661859	0.000035224	-0.000005701		
			0.277343967	0.000010454	-0.000001382		
3P3/2 -- (4)	327.836532	-769.376719	5.328860373	0.014282786		-0.000845134	0.000131095
			5.678635962	0.003196211	-0.000018610		
			5.410644687	0.007839738	-0.000151301		
			3.235941003	0.003157745	-0.000409764		
			3.283310855	0.001386975	-0.000105420		
			2.970248054	0.002411606	-0.000349336		
			3.056070495	0.001223059	-0.000115571		
			2.971493793	0.002621053	-0.000403424		
			3.035629047	0.001102377	-0.000110912		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM	601	Z=89 A=227 R=1.38334E-04 A.U.					
4F7/2			2.972504871	0.001062564	-0.000314214		
5S1/2			1.670916054	0.000704595	-0.000095699		
5P1/2			1.615850902	0.000304236	-0.000025888		
5P3/2			1.457754995	0.000522840	-0.000081141		
5D3/2			1.308355238	0.000224285	-0.000022354		
5D5/2			1.267907222	0.000463425	-0.000078211		
6S1/2			0.764927546	0.000133493	-0.000018302		
6P1/2			0.682007122	0.000049094	-0.000004262		
6P3/2			0.599643345	0.000078452	-0.000012313		
6D3/2			0.360163317	0.000013421	-0.000001346		
7S1/2			0.277016905	0.000014341	-0.000001969		
3D3/2 -- (4)	321.727204	-760.971752	6.205167475	0.024409795		-0.000015432	0.000003116
3D5/2			6.161136991	0.004432577	-0.000000372		
4S1/2			3.336861441	0.001171881	-0.000030378		
4P1/2			3.346042177	0.002375056	-0.000176261		
4P3/2			3.090950153	0.000813100	-0.000020855		
4D3/2			3.080286249	0.002805383	-0.000274017		
4D5/2			3.067615064	0.000918492	-0.000013428		
4F5/2			3.022156373	0.004906784	-0.001215568		
4F7/2			3.047224450	0.000166418	-0.000019677		
5S1/2			1.693515265	0.000275523	-0.000009302		
5P1/2			1.630102466	0.000491537	-0.000038975		
5P3/2			1.481977300	0.000177881	-0.000005496		
5D3/2			1.313866518	0.000467079	-0.000050124		
5D5/2			1.283960205	0.000156458	-0.000002751		
6S1/2			0.769212800	0.000052725	-0.000001874		
6P1/2			0.684318719	0.000078491	-0.000006312		
6P3/2			0.603230108	0.000026737	-0.000000854		
6D3/2			0.360500135	0.000027614	-0.000002998		
7S1/2			0.277477323	0.000005673	-0.000000203		
3D5/2 -- (6)	298.189695	-726.374565	6.005796595	0.020161381		-0.000002673	0.000000818
4S1/2			3.315332393	0.001367764	-0.000030496		
4P1/2			3.352027499	0.000979075	-0.000015183		
4P3/2			3.059864870	0.001583881	-0.000068493		
4D3/2			3.127118902	0.000749968	-0.000014827		
4D5/2			3.005681871	0.002470054	-0.000173091		
4F5/2			3.078881139	0.001029140	-0.000075905		
4F7/2			2.988010158	0.003059080	-0.000850770		
5S1/2			1.688505252	0.000313438	-0.000009308		
5P1/2			1.630370386	0.000211023	-0.000004505		
5P3/2			1.475651219	0.000331367	-0.000016123		
5D3/2			1.320333433	0.000127654	-0.000003045		
5D5/2			1.274468415	0.000405619	-0.000031383		
6S1/2			0.768255092	0.000059686	-0.000001874		
6P1/2			0.684333589	0.000033948	-0.000000767		
6P3/2			0.602291015	0.000049409	-0.000002458		
6D3/2			0.360872693	0.000007570	-0.000000185		
7S1/2			0.277374292	0.000006417	-0.000000203		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
4S1/2 -- (2)	154.831566	-403.391911	2.653767207	0.001421774		-0.027388591	0.001199311
4P1/2			2.362336733	0.000620682	-0.000329635		
4P3/2			2.242405591	0.000862942	-0.000161972		
4D3/2			2.402394641	0.000611366	-0.000056163		
4D5/2			2.363787332	0.000539613	-0.000063403		
4F5/2			2.451323839	0.000434086	-0.000036734		
4F7/2			2.432085130	0.000441944	-0.000037683		
5S1/2			1.497565290	0.000247972	-0.000108232		
5P1/2			1.473713160	0.000244840	-0.000048043		
5P3/2			1.345597658	0.000137762	-0.000026580		
5D3/2			1.216096203	0.000062540	-0.000007245		
5D5/2			1.182487955	0.000085962	-0.000007327		
6S1/2			0.733559030	0.000047738	-0.000021476		
6P1/2			0.659687118	0.000041948	-0.000008477		
6P3/2			0.583272377	0.000021542	-0.000004190		
6D3/2			0.354764837	0.000003751	-0.000000447		
7S1/2			0.273668132	0.000005139	-0.000002321		
4P1/2 -- (2)	149.209034	-394.043527	2.665943719	0.002638482		-0.004593861	0.000288354
4P3/2			2.398100256	0.000267023	-0.000006293		
4D3/2			2.260242857	0.001482871	-0.000256720		
4D5/2			2.419215991	0.000327504	-0.000010542		
4F5/2			2.408898384	0.000703529	-0.000090515		
4F7/2			2.456472684	0.000319230	-0.000010794		
5S1/2			1.525716422	0.000277249	-0.000041066		
5P1/2			1.445779852	0.000307086	-0.000089475		
5P3/2			1.355581141	0.000082156	-0.000006922		
5D3/2			1.209789418	0.000119544	-0.000018924		
5D5/2			1.186198055	0.000062666	-0.000002490		
6S1/2			0.737997432	0.000051111	-0.000008012		
6P1/2			0.655961159	0.000049126	-0.000014978		
6P3/2			0.584571329	0.000012659	-0.000001162		
6D3/2			0.354437526	0.000007197	-0.000001150		
7S1/2			0.274132186	0.000005469	-0.000000864		
4P3/2 -- (4)	111.601372	-336.570313	2.323372161	0.001261403		-0.000225001	0.000034741
4D3/2			2.323174301	0.000349966	-0.000010949		
4D5/2			2.195912941	0.000797155	-0.000068881		
4F5/2			2.345643340	0.000294100	-0.000012921		
4F7/2			2.299009629	0.000499249	-0.000037928		
5S1/2			1.497273303	0.000434804	-0.000066875		
5P1/2			1.455971090	0.000135597	-0.000012587		
5P3/2			1.320327257	0.000202407	-0.000036903		
5D3/2			1.203163802	0.000053592	-0.000004746		
5D5/2			1.167087168	0.000131114	-0.000012219		
6S1/2			0.732987684	0.000075744	-0.000012153		
6P1/2			0.656835124	0.000021418	-0.000002182		
6P3/2			0.579736588	0.000030008	-0.000005778		
6D3/2			0.353997394	0.000003302	-0.000000313		
7S1/2			0.273598628	0.000008046	-0.000001299		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
4D3/2 -- (4)	102.805467	-320.346516	2.339445599	0.001713518		-0.000004607	0.000000927
4D5/2			2.329366868	0.000312247	-0.000000056		
4F5/2			2.245120445	0.000893478	-0.0000397865		
4F7/2			2.351546473	0.000267464	-0.000001938		
5S1/2			1.505779924	0.000139933	-0.000005445		
5P1/2			1.446464838	0.000321629	-0.000036205		
5P3/2			1.338796984	0.000079910	-0.000003459		
5D3/2			1.187447158	0.000181918	-0.000021858		
5D5/2			1.173313806	0.000056065	-0.000001136		
6S1/2			0.734412592	0.000025304	-0.000001251		
6P1/2			0.655805762	0.000046653	-0.000005491		
6P3/2			0.582113323	0.000011705	-0.000000565		
6D3/2			0.353176015	0.000010599	-0.000001348		
7S1/2			0.273748566	0.000002702	-0.000000138		
4D5/2 -- (6)	95.676089	-308.149478	2.281029736	0.001413890		-0.000000797	0.000000243
4F5/2			2.327137462	0.000245682	-0.000005167		
4F7/2			2.231225543	0.000746894	-0.000061003		
5S1/2			1.496676799	0.000163543	-0.000005336		
5P1/2			1.452060436	0.000096884	-0.000002229		
5P3/2			1.327151212	0.000177766	-0.000013668		
5D3/2			1.200822755	0.000048179	-0.000001312		
5D5/2			1.156987415	0.000158126	-0.000013689		
6S1/2			0.732843396	0.000028660	-0.000001243		
6P1/2			0.656253858	0.000014813	-0.000000450		
6P3/2			0.580553271	0.000024988	-0.000002013		
6D3/2			0.353858223	0.000002834	-0.000000087		
7S1/2			0.273581675	0.000003050	-0.000000137		
4F5/2 -- (6)	82.110563	-282.992314	2.343945273	0.001701457		-0.000000002	0.000000001
4F7/2			2.366822244	0.000272463	-0.000000001		
5S1/2			1.503990517	0.000084502	-0.000000033		
5P1/2			1.447914447	0.000116121	-0.000000462		
5P3/2			1.336505423	0.000054946	-0.000000178		
5D3/2			1.195555358	0.000108011	-0.000003986		
5D5/2			1.171031893	0.000036258	-0.000000307		
6S1/2			0.734219612	0.000015568	-0.000000094		
6P1/2			0.656116217	0.000017472	-0.000000212		
6P3/2			0.581838452	0.000008060	-0.000000056		
6D3/2			0.353622103	0.000006060	-0.000000235		
7S1/2			0.273727849	0.000001666	-0.000000012		
4F7/2 -- (8)	79.714495	-278.417878	2.321004481	0.001559019		-0.000000000	0.000000000
5S1/2			1.499541519	0.000104209	-0.000000022		
5P1/2			1.452605893	0.000073274	-0.000000060		
5P3/2			1.330107181	0.000091948	-0.000000418		
5D3/2			1.201001281	0.000040439	-0.000000151		
5D5/2			1.163651639	0.000094130	-0.000002601		
6S1/2			0.733448404	0.000018169	-0.000000091		
6P1/2			0.656436746	0.000010954	-0.000000046		
6P3/2			0.581032706	0.000012891	-0.000000120		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
6D3/2			0.353875789	0.000002325	-0.000000012		
7S1/2			0.273645695	0.000001934	-0.000000012		
5S1/2 -- (2)	46.131594	-176.551552	1.254783677	0.000132774		-0.006730266	0.000294533
5P1/2			1.085013442	0.000092219	-0.000009283		
5P3/2			1.032611421	0.000113025	-0.000028707		
5D3/2			1.018687915	0.000080642	-0.000010560		
5D5/2			0.999371646	0.000043616	-0.000010811		
6S1/2			0.674629377	0.000019575	-0.000009678		
6P1/2			0.617248695	0.000011311	-0.000002603		
6P3/2			0.549903787	0.000007966	-0.000002546		
6D3/2			0.344577082	0.000002950	-0.000000460		
7S1/2			0.267626550	0.000002111	-0.000001069		
5P1/2 -- (2)	41.740165	-166.592399	1.200434568	0.000220972		-0.001054754	0.000066134
5P3/2			1.077331390	0.000021905	-0.000000725		
5D3/2			0.944120882	0.0000201716	-0.000045485		
5D5/2			1.001588528	0.000017519	-0.000001717		
6S1/2			0.679737041	0.000030659	-0.000004870		
6P1/2			0.605814021	0.000018818	-0.000006327		
6P3/2			0.550875550	0.000004627	-0.000000466		
6D3/2			0.342286087	0.000005800	-0.000001477		
7S1/2			0.268054122	0.000003139	-0.000000517		
5P3/2 -- (4)	31.347948	-145.459498	1.044389195	0.000105395		-0.000050858	0.000007844
5D3/2			0.971270338	0.000041878	-0.000003010		
5D5/2			0.914765490	0.000078445	-0.000016113		
6S1/2			0.667048498	0.000046465	-0.000007449		
6P1/2			0.608350390	0.000009356	-0.000000940		
6P3/2			0.540252262	0.000011540	-0.000002380		
6D3/2			0.342385784	0.000001306	-0.000000114		
7S1/2			0.266829321	0.000004549	-0.000000757		
5D3/2 -- (4)	23.828791	-124.818347	0.917102412	0.000102486		-0.000000857	0.000000172
5D5/2			0.912642196	0.000018741	-0.000000005		
6S1/2			0.651046321	0.000011942	-0.000000355		
6P1/2			0.587946480	0.000027718	-0.000003201		
6P3/2			0.535923954	0.000005553	-0.000000303		
6D3/2			0.337415369	0.000003717	-0.000000451		
7S1/2			0.265359548	0.000001198	-0.000000053		
5D5/2 -- (6)	22.063082	-120.320034	0.892910337	0.000083733		-0.000000147	0.000000045
6S1/2			0.645811755	0.000015149	-0.000000301		
6P1/2			0.592692673	0.000007080	-0.000000140		
6P3/2			0.530756688	0.000013596	-0.000001306		
6D3/2			0.339284743	0.000001002	-0.000000027		
7S1/2			0.264900258	0.000001410	-0.000000049		
6S1/2 -- (2)	10.484988	-73.435467	0.560364357	0.000010080		-0.001299833	0.000056876
6P1/2			0.465399858	0.000011599	-0.000001608		
6P3/2			0.437671567	0.000010933	-0.000003050		
6D3/2			0.319161257	0.000003256	-0.000000442		
7S1/2			0.252038380	0.000000803	-0.000000397		
6P1/2 -- (2)	8.121637	-64.388461	0.496760420	0.000013514		-0.000171703	0.000010764

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ACTINIUM 6D1 Z=89 A=227 R=1.38334E-04 A.U.							
6P3/2			0.439499330	0.000001306	-0.000000043		
6D3/2			0.300437072	0.000009063	-0.000002120		
7S1/2			0.251144866	0.000001728	-0.000000267		
6P3/2 -- (4)	5.763953	-55.729801	0.421683957	0.000006022		-0.000007694	0.000001186
6D3/2			0.303334428	0.000002029	-0.000000202		
7S1/2			0.245732928	0.000002321	-0.000000339		
6D3/2 -- (1)	1.916045	-32.552345	0.000000000	0.000000000		-0.000000051	0.000000010
7S1/2			0.212514312	0.000000283	-0.000000004		
7S1/2 -- (2)	1.302133	-25.231400	0.202618553	0.000000414		-0.000140064	0.000006129
ETOT	-25735.50948	30973.27105	-65978.74937	9243.33833	37.246889267	-3.941159255	-7.008070678 0.332855239
THORIUM 6D2 Z=90 A=232 R=1.39342E-04 A.U.							
1S1/2 -- (2)	5978.531444	-10590.138494	67.965164716	11.111091226		-3.010477574	0.145452326
2S1/2			21.378267890	0.617662614	-0.075631917		
2P1/2			26.553497567	1.275331353	-0.160641502		
2P3/2			21.135667494	0.541694994	-0.156501469		
3S1/2			8.944305655	0.136516521	-0.017860477		
3P1/2			10.000261705	0.257688875	-0.031871245		
3P3/2			8.508436595	0.122700404	-0.036541527		
3D3/2			8.668027001	0.005449388	-0.000614522		
3D5/2			8.266845447	0.002143369	-0.000686255		
4S1/2			4.132203231	0.036281573	-0.004815781		
4P1/2			4.334219077	0.065172778	-0.008027630		
4P3/2			3.779191316	0.031296677	-0.009384950		
4D3/2			3.664115983	0.001561495	-0.000176759		
4D5/2			3.522500965	0.000613764	-0.000198376		
4F5/2			3.247677537	0.000004766	-0.000000492		
4F7/2			3.194310568	0.000001833	-0.000000603		
5S1/2			1.914342760	0.009026026	-0.001202443		
5P1/2			1.883119278	0.015044765	-0.001851283		
5P3/2			1.662832241	0.007148568	-0.002147197		
5D3/2			1.452152947	0.000299169	-0.000033893		
5D5/2			1.399971003	0.000116597	-0.000037760		
6S1/2			0.839139547	0.001830081	-0.000244012		
6P1/2			0.757276920	0.002614461	-0.000321645		
6P3/2			0.659566358	0.001162659	-0.000349345		
6D3/2			0.413933928	0.000022510	-0.000002550		
7S1/2			0.299741683	0.000207290	-0.000027643		
2S1/2 -- (2)	1478.693542	-2666.195347	15.548723599	0.245480198		-0.469083902	0.021202341
2P1/2			15.553407630	0.075081016	-0.000093136		
2P3/2			14.098057564	0.103351137	-0.003747761		
3S1/2			7.365687470	0.029572911	-0.007120294		
3P1/2			8.111300539	0.050723221	-0.007803326		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	602	Z=90 A=232 R=1.39342E-04 A.U.					
3P3/2			7.314684161	0.030645778	-0.003457641		
3D3/2			8.133497849	0.028587712	-0.003906548		
3D5/2			7.831025666	0.012183166	-0.003843222		
4S1/2			3.729300547	0.007791197	-0.001977031		
4P1/2			3.861522118	0.013247384	-0.002104325		
4P3/2			3.483420086	0.008079586	-0.001029784		
4D3/2			3.534355276	0.005953568	-0.000580032		
4D5/2			3.417304440	0.002673442	-0.000963349		
4F5/2			3.243463039	0.000365204	-0.000050349		
4F7/2			3.190627640	0.000137829	-0.000049031		
5S1/2			1.814989100	0.001933421	-0.000495822		
5P1/2			1.774211909	0.003089208	-0.000491601		
5P3/2			1.595687787	0.001855962	-0.000242465		
5D3/2			1.428067554	0.001070438	-0.000156416		
5D5/2			1.380644280	0.000482852	-0.000156330		
6S1/2			0.819034375	0.000391777	-0.000100706		
6P1/2			0.738358457	0.000537519	-0.000085636		
6P3/2			0.648659056	0.000302185	-0.000039674		
6D3/2			0.412130296	0.000079773	-0.000011677		
7S1/2			0.297465174	0.000044371	-0.000011410		
2P1/2 -- (2)	1477.944181	-2665.682344	19.349689689	0.563234556		-0.072687684	0.004753946
2P3/2			16.581385207	0.064432460	-0.000251132		
3S1/2			7.861504555	0.020156771	-0.001384754		
3P1/2			8.111083978	0.047233906	-0.006953575		
3P3/2			7.642403140	0.015932768	-0.000423544		
3D3/2			8.150984870	0.083909894	-0.019971444		
3D5/2			8.045027532	0.002435350	-0.000584256		
4S1/2			3.848282904	0.005294042	-0.000406639		
4P1/2			3.873826865	0.011567853	-0.001870590		
4P3/2			3.562830606	0.004065630	-0.000127651		
4D3/2			3.541519701	0.018648193	-0.004571106		
4D5/2			3.466611869	0.000635299	-0.000143612		
4F5/2			3.244453366	0.000444431	-0.000093188		
4F7/2			3.192664630	0.000024385	-0.000009315		
5S1/2			1.843905029	0.001312726	-0.000103384		
5P1/2			1.777629880	0.002650732	-0.000437046		
5P3/2			1.613629958	0.000928274	-0.000030185		
5D3/2			1.429502219	0.003398803	-0.000838009		
5D5/2			1.389612134	0.000118790	-0.000026499		
6S1/2			0.824866657	0.000265955	-0.000021065		
6P1/2			0.738973106	0.000459922	-0.000076136		
6P3/2			0.651570806	0.000150961	-0.000004944		
6D3/2			0.412238909	0.000253816	-0.000062636		
7S1/2			0.298125192	0.000030120	-0.000002388		
2P3/2 -- (4)	962.353611	-1998.928053	15.368188949	0.240303991		-0.003243709	0.000524840
3S1/2			7.600340201	0.024773522	-0.002011044		
3P1/2			8.175182856	0.015057687	-0.000711354		
3P3/2			7.232426789	0.029852576	-0.002794270		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E($\epsilon-\epsilon$)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM 6D2 Z=90 A=232 R=1.34342E-J4 A.U.							
3D3/2			8.232978310	0.025136543	-0.002424553		
3D5/2			7.749072524	0.041349495	-0.011757458		
4S1/2			3.781019459	0.006119567	-0.000530867		
4P1/2			3.876257094	0.003692100	-0.000201079		
4P3/2			3.467621020	0.007189604	-0.000746975		
4D3/2			3.550774618	0.005356663	-0.000520873		
4D5/2			3.402766782	0.008680344	-0.002552798		
4F5/2			3.243606228	0.000320843	-0.000031155		
4F7/2			3.189624048	0.000275908	-0.000089359		
5S1/2			1.827280479	0.001496971	-0.000132044		
5P1/2			1.777537441	0.000846835	-0.000047588		
5P3/2			1.592314615	0.001620635	-0.000172031		
5D3/2			1.431087239	0.000969461	-0.000094467		
5D5/2			1.378118603	0.001554122	-0.000459817		
6S1/2			0.821500871	0.000302346	-0.000026773		
6P1/2			0.738933572	0.000146966	-0.000008313		
6P3/2			0.648118072	0.000262868	-0.000028024		
6D3/2			0.412356091	0.000072323	-0.000007050		
7S1/2			0.297744051	0.000034223	-0.000003033		
3S1/2 -- (2)	472.448909	-972.504730	5.905913633	0.015915410		-0.109798940	0.004915081
3P1/2			5.457307690	0.005429225	-0.000064392		
3P3/2			5.117765395	0.007734782	-0.000795541		
3D3/2			5.876450000	0.004867876	-0.000169321		
3D5/2			5.773094089	0.006289467	-0.000212651		
4S1/2			3.252093610	0.002669051	-0.000942284		
4P1/2			3.364472063	0.003750979	-0.000649214		
4P3/2			3.073242963	0.002171225	-0.000271618		
4D3/2			3.137947559	0.001422878	-0.000137924		
4D5/2			3.057893656	0.001397782	-0.000115946		
4F5/2			3.116460628	0.001353523	-0.000190114		
4F7/2			3.073061557	0.000616937	-0.000185844		
5S1/2			1.703468996	0.000658838	-0.000241050		
5P1/2			1.662867244	0.000904241	-0.000161535		
5P3/2			1.505101294	0.000521863	-0.000069597		
5D3/2			1.357274080	0.000279154	-0.000029497		
5D5/2			1.316999272	0.000251601	-0.000024844		
6S1/2			0.796702981	0.000133264	-0.000049055		
6P1/2			0.719119891	0.000158220	-0.000028416		
6P3/2			0.634018262	0.000085622	-0.000011547		
6D3/2			0.406858102	0.000021043	-0.000002249		
7S1/2			0.294941003	0.000015088	-0.000005559		
3P1/2 -- (2)	467.212613	-965.434702	6.307064152	0.031806091		-0.019091562	0.001225159
3P3/2			5.629554650	0.003365452	-0.000044107		
3D3/2			5.758652652	0.011189168	-0.000908803		
3D5/2			6.070646004	0.004671331	-0.000041026		
4S1/2			3.365291312	0.002252793	-0.000270984		
4P1/2			3.309795146	0.003825475	-0.000876940		
4P3/2			3.127135060	0.001102379	-0.000064067		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	6D2	Z=90 A=232 R=1.39342E-04 A.U.					
4D3/2			3.160203495	0.003189224	-0.000470164		
4D5/2			3.095378484	0.000952414	-0.000032216		
4F5/2			3.108141130	0.002302837	-0.0000508481		
4F7/2			3.101325406	0.000253319	-0.000053912		
5S1/2			1.727460301	0.000542838	-0.000070447		
5P1/2			1.654036549	0.000863197	-0.000209753		
5P3/2			1.516318576	0.000256162	-0.000016714		
5D3/2			1.361573120	0.000636953	-0.000101957		
5D5/2			1.323565329	0.000166959	-0.000006809		
6S1/2			0.801410482	0.000109256	-0.000014396		
6P1/2			0.717697918	0.000149291	-0.000036637		
6P3/2			0.535621985	0.000041774	-0.000002781		
6D3/2			0.407181202	0.000048136	-0.000001778		
7S1/2			0.295471286	0.000012360	-0.0000001633		
3P3/2 -- (4)	337.255785	-789.393673	5.403557002	0.014880147		-0.000908800	0.00014266
3D3/2			5.759788056	0.003328023	-0.000018992		
3D5/2			5.485935858	0.008159188	-0.000157064		
4S1/2			3.292118312	0.003344073	-0.000435891		
4P1/2			3.342529417	0.001467239	-0.000111783		
4P3/2			3.017932846	0.002528771	-0.000366785		
4D3/2			3.109664498	0.001291343	-0.000122136		
4D5/2			3.022293965	0.002757302	-0.000425220		
4F5/2			3.098406343	0.001169174	-0.000117607		
4F7/2			3.033172656	0.001127481	-0.000333253		
5S1/2			1.710410792	0.000756426	-0.000103203		
5P1/2			1.657750236	0.000327745	-0.000027976		
5P3/2			1.493911561	0.000560351	-0.000087120		
5D3/2			1.352342307	0.000246273	-0.000024578		
5D5/2			1.310837788	0.000507811	-0.000085976		
6S1/2			0.797995277	0.000150450	-0.000020725		
6P1/2			0.718229012	0.000056602	-0.000004933		
6P3/2			0.632238121	0.000090584	-0.000014249		
6D3/2			0.406492274	0.000018493	-0.000001858		
7S1/2			0.295085227	0.000016986	-0.000002344		
3D3/2 -- (4)	331.067377	-780.910645	6.296149711	0.025451171		-0.000017087	0.000003534
3D5/2			6.248634458	0.004613289	-0.000000407		
4S1/2			3.395713418	0.001232491	-0.000032042		
4P1/2			3.407223428	0.002507769	-0.000187313		
4P3/2			3.141404332	0.000852310	-0.000021889		
4D3/2			3.134893575	0.002949357	-0.000288859		
4D5/2			3.120951476	0.000965029	-0.000014142		
4F5/2			3.084905778	0.005210521	-0.001291019		
4F7/2			3.110605342	0.000176998	-0.000020904		
5S1/2			1.733956093	0.000294231	-0.000009982		
5P1/2			1.672730686	0.000528382	-0.000042167		
5P3/2			1.519224118	0.000190617	-0.000005909		
5D3/2			1.358303702	0.000510149	-0.000054961		
5D5/2			1.327990601	0.000171179	-0.000003025		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)		
THORIUM	602	Z=90 A=232 R=1.39342E-04 A.U.							
3D5/2 --	(6)	306.301303	-744.558711	0.802683510 0.720830180 0.636274017 0.406950070 0.295614643 6.088423816 3.373136878 3.412725772 3.109234367 3.182236622 3.057196098 3.143196082 3.049241249 1.728620711 1.672858078 1.512529611 1.365055337 1.317826015 0.801612215 0.720819223 0.635203667 0.407436318 0.295493496	0.000059140 0.000090264 0.000030871 0.000037812 0.000006689 0.020981132 0.001437055 0.001029767 0.001658439 0.000787790 0.002592076 0.001093280 0.003247819 0.000334247 0.000226159 0.000354486 0.000139364 0.000442917 0.000066841 0.000038938 0.000056927 0.000010365 0.000007553	-0.000002115 -0.000007309 -0.000000991 -0.000004125 -0.000000241 -0.000002935 -0.000000921 -0.000032160 -0.000016017 -0.000071896 -0.000015638 -0.000182225 -0.000080560 -0.000903310 -0.000009987 -0.000004860 -0.000017312 -0.000003347 -0.000034425 -0.000002115 -0.000000887 -0.000002845 -0.000000255 -0.000000241			
4S1/2 --	(2)	161.293779	-416.673196	2.701647736 2.406163513 2.281282385 2.445990773 2.405985126 2.501342529 2.481515777 1.531716105 1.510537464 1.377877327 1.255041715 1.220686206 0.764071064 0.693503241 0.614007357 0.399358730 0.291280617	0.001503853 0.000652767 0.000916701 0.000645797 0.000568210 0.000458962 0.000468855 0.000266721 0.000266998 0.000147053 0.000068684 0.000094319 0.000053933 0.000049013 0.000024787 0.000005175 0.000006103	-0.000030567 -0.000174693 -0.000059442 -0.000067292 -0.000038631 -0.000039678 -0.000116515 -0.000052351 -0.000028853 -0.000007998 -0.000008103 -0.000024290 -0.000009903 -0.000004897 -0.000000621 -0.000002760	-0.029597311	0.001321782	
4P1/2 --	(2)	155.586254	-407.245106	2.716310719 2.440329311 2.302235907 2.463260950 2.458988510 2.507342313 1.560998269 1.481762936	0.002795654 0.000278360 0.001573687 0.000343980 0.000744812 0.000339228 0.000296974 0.000332197	-0.000007010 -0.000273743 -0.000011276 -0.000095405 -0.000011402 -0.000044028 -0.000096971	-0.005123355	0.000327287	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	6D2	Z=90 A=232 R=1.39342E-04 A.U.					
5P3/2			1.388432384	0.000087555	-0.000007502		
5D3/2			1.248522865	0.000131184	-0.000020945		
5D5/2			1.224724657	0.000068712	-0.000002766		
6S1/2			0.768904726	0.000057473	-0.000009029		
6P1/2			0.689423626	0.000056868	-0.000017384		
6P3/2			0.615482838	0.000014554	-0.000001360		
6D3/2			0.398939883	0.000009919	-0.000001599		
7S1/2			0.291810741	0.000006461	-0.000001024		
4P3/2 -- (4)	115.493941	-346.265201	2.361536335	0.001326150		-0.000243595	0.000038486
4D3/2			2.363438357	0.000366705	-0.000011264		
4D5/2			2.233493615	0.000837589	-0.000071636		
4F5/2			2.391088699	0.000309359	-0.000013343		
4F7/2			2.343534615	0.000527407	-0.000039228		
5S1/2			1.530866729	0.000470173	-0.000072493		
5P1/2			1.491586043	0.000147355	-0.000013714		
5P3/2			1.351410725	0.000217822	-0.000039888		
5D3/2			1.241075355	0.000059372	-0.000005305		
5D5/2			1.204167846	0.000144953	-0.000013656		
6S1/2			0.763339345	0.000085737	-0.000013803		
6P1/2			0.690248871	0.000024863	-0.000002546		
6P3/2			0.610023674	0.000034775	-0.000006733		
6D3/2			0.398319674	0.000004602	-0.000000441		
7S1/2			0.291188132	0.000009562	-0.000001549		
4D3/2 -- (4)	106.625387	-330.000102	2.382153706	0.001808693		-0.000005153	0.000001061
4D5/2			2.371240122	0.000328851	-0.000000062		
4F5/2			2.291139233	0.000940278	-0.000101273		
4F7/2			2.399218080	0.000284066	-0.000002017		
5S1/2			1.540245456	0.000150226	-0.000005892		
5P1/2			1.482282545	0.000348075	-0.000039373		
5P3/2			1.370930935	0.000085872	-0.000003733		
5D3/2			1.224867491	0.000199719	-0.000024223		
5D5/2			1.210998454	0.000061596	-0.000001263		
6S1/2			0.764983368	0.000028493	-0.000001425		
6P1/2			0.689207415	0.000053845	-0.000006377		
6P3/2			0.612721591	0.000013544	-0.000000660		
6D3/2			0.397270011	0.000014574	-0.000001876		
7S1/2			0.291369725	0.000003197	-0.000000165		
4D5/2 -- (6)	99.100739	-317.181985	2.321448721	0.001490318		-0.000000884	0.000000276
4F5/2			2.373720927	0.000258853	-0.000005305		
4F7/2			2.276033221	0.000787481	-0.000062798		
5S1/2			1.530677077	0.000175399	-0.000005773		
5P1/2			1.487881187	0.000104440	-0.000002423		
5P3/2			1.358775742	0.000190925	-0.000014730		
5D3/2			1.238809168	0.000052868	-0.000001458		
5D5/2			1.193700626	0.000173573	-0.000015184		
6S1/2			0.763252835	0.000032220	-0.000001417		
6P1/2			0.689659998	0.000017061	-0.000000526		
6P3/2			0.610970693	0.000028859	-0.000002336		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM	602	Z=90	A=232 R=1.39342E-04 A.U.				
6D3/2			0.398150529	0.000003898	-0.000000122		
7S1/2			0.291176399	0.000003601	-0.000000165		
4F5/2 -- (6)	85.564034	-292.291603	2.397042123	0.001813899		-0.000000002	0.000000001
4F7/2			2.420284817	0.000290755	-0.000000001		
5S1/2			1.539836440	0.000090832	-0.000000045		
5P1/2			1.485190767	0.000125398	-0.000000545		
5P3/2			1.369587827	0.000059273	-0.000000206		
5D3/2			1.234284097	0.000118534	-0.000004435		
5D5/2			1.209324619	0.000039926	-0.000000345		
6S1/2			0.765021559	0.000017565	-0.000000112		
6P1/2			0.689749665	0.000020164	-0.000000258		
6P3/2			0.612566690	0.000009362	-0.000000069		
6D3/2			0.397913575	0.000008313	-0.000000328		
7S1/2			0.291373606	0.000001975	-0.000000015		
4F7/2 -- (8)	83.030629	-287.488465	2.373152970	0.001661379		-0.000000000	0.000000000
5S1/2			1.535212907	0.000111765	-0.000000032		
5P1/2			1.489848919	0.000078978	-0.000000072		
5P3/2			1.363008768	0.000098906	-0.000000483		
5D3/2			1.239852106	0.000044397	-0.000000173		
5D5/2			1.201597057	0.000103302	-0.000002892		
6S1/2			0.764178537	0.000020458	-0.000000109		
6P1/2			0.690078803	0.000012629	-0.000000056		
6P3/2			0.611671568	0.000014926	-0.000000147		
6D3/2			0.398234658	0.000003197	-0.000000018		
7S1/2			0.291279251	0.000002287	-0.000000015		
5S1/2 -- (2)	48.786574	-183.446695	1.284699645	0.000143429		-0.007390360	0.000329843
5P1/2			1.112222056	0.000098228	-0.000009745		
5P3/2			1.058061981	0.000123471	-0.000031441		
5D3/2			1.049237789	0.000087946	-0.000011492		
5D5/2			1.029645272	0.000047874	-0.000011815		
6S1/2			0.701130748	0.000022338	-0.000011104		
6P1/2			0.647094235	0.000013440	-0.000003098		
6P3/2			0.577361288	0.000009304	-0.000003003		
6D3/2			0.386111340	0.000003940	-0.000000620		
7S1/2			0.284514756	0.000002531	-0.000001289		
5P1/2 -- (2)	44.331923	-173.479385	1.231838812	0.000240229		-0.001199979	0.000076570
5P3/2			1.104860265	0.000023492	-0.000000836		
5D3/2			0.972992312	0.000220952	-0.000049774		
5D5/2			1.032728684	0.000019321	-0.000001891		
6S1/2			0.706794341	0.000034688	-0.000005537		
6P1/2			0.634816151	0.000022017	-0.000007480		
6P3/2			0.578518111	0.000005368	-0.000000558		
6D3/2			0.383262247	0.000007717	-0.000001979		
7S1/2			0.285009238	0.000003725	-0.000000618		
5P3/2 -- (4)	33.144480	-151.063047	1.070406217	0.000114101		-0.000056312	0.000008887
5D3/2			1.000289905	0.000045165	-0.000003194		
5D5/2			0.942189279	0.000085226	-0.000017261		
6S1/2			0.693095462	0.000053266	-0.000008571		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
THORIUM 6D2 Z=90 A=232 R=1.39342E-04 A.U.							
6P1/2			0.637336131	0.000011053	-0.000001119		
6P3/2			0.566811743	0.000013530	-0.000002833		
6D3/2			0.383276294	0.000001753	-0.000000155		
7S1/2			0.283623677	0.000005452	-0.000000913		
5D3/2 -- (4)	25.619791	-130.737925	0.948202354	0.000113809		-0.000000998	0.000000205
5D5/2			0.943688082	0.000020789	-0.000000005		
6S1/2			0.677549413	0.000013777	-0.000000435		
6P1/2			0.616511108	0.000032740	-0.000003852		
6P3/2			0.562780422	0.000006533	-0.000000363		
6D3/2			0.377160099	0.000005191	-0.000000656		
7S1/2			0.282120243	0.000001446	-0.000000067		
5D5/2 -- (6)	23.729224	-126.027258	0.923404111	0.000093056		-0.000000170	0.000000053
6S1/2			0.672087416	0.000017325	-0.000000373		
6P1/2			0.621354584	0.000008264	-0.000000172		
6P3/2			0.557323277	0.000015956	-0.000001564		
6D3/2			0.379489551	0.000001402	-0.000000040		
7S1/2			0.281616198	0.000001690	-0.000000062		
6S1/2 -- (2)	11.640486	-77.785287	0.584094568	0.000011568		-0.001499747	0.000066926
6P1/2			0.487432389	0.000013111	-0.000001799		
6P3/2			0.458395081	0.000012922	-0.000003594		
6D3/2			0.354190408	0.000004484	-0.000000610		
7S1/2			0.267711050	0.000000986	-0.000000496		
6P1/2 -- (2)	9.212091	-68.851161	0.522570044	0.000015932		-0.000209182	0.000013344
6P3/2			0.462630821	0.000001520	-0.000000056		
6D3/2			0.332282777	0.000012351	-0.000002889		
7S1/2			0.267024630	0.000002109	-0.000000329		
6P3/2 -- (4)	6.550829	-59.590178	0.444073320	0.000007117		-0.000009182	0.000001449
6D3/2			0.335699513	0.000002692	-0.000000266		
7S1/2			0.261280351	0.000002893	-0.000000429		
6D3/2 -- (2)	2.533146	-37.257378	0.279239673	0.000002686		-0.000000075	0.000000015
7S1/2			0.231835121	0.000000373	-0.000000062		
7S1/2 -- (2)	1.519132	-27.233062	0.215698030	0.000000504		-0.000169899	0.000007582
ETOT	-26483.06830	32044.32978	-68031.67412	9476.68967	38.796672429	-4.101956346	-7.470622433
							0.362282819
PROTDACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
1S1/2 -- (2)	6183.718335	-10915.250687	69.117812365	11.538305705		-3.201039426	0.157806329
2S1/2			21.763463861	0.643857454	-0.078993226		
2P1/2			27.083453564	1.328715994	-0.166159023		
2P3/2			21.413032564	0.560210820	-0.161838491		
3S1/2			9.105254341	0.142511249	-0.018677811		
3P1/2			10.194108181	0.268597356	-0.032945020		
3P3/2			8.632139261	0.127466337	-0.037956094		
3D3/2			8.795340422	0.005641782	-0.000632700		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3D5/2			8.378606051	0.002216522	-0.000709532		
4S1/2			4.211765130	0.038037720	-0.005057758		
4P1/2			4.424014286	0.068253719	-0.008335276		
4P3/2			3.843671835	0.032715754	-0.009809431		
4D3/2			3.731285472	0.001631714	-0.000183676		
4D5/2			3.584191956	0.000640977	-0.000207135		
4F5/2			3.314714680	0.000005046	-0.000000518		
4F7/2			3.259306048	0.000001944	-0.000000640		
5S1/2			1.960882636	0.009588930	-0.001279710		
5P1/2			1.933364114	0.016002408	-0.001952152		
5P3/2			1.701262307	0.007585008	-0.002278092		
5D3/2			1.491000938	0.000319376	-0.000035980		
5D5/2			1.435804226	0.000124275	-0.000040241		
5F5/2			0.851589395	0.000000411	-0.000000042		
6S1/2			0.852607672	0.001906464	-0.000254652		
6P1/2			0.766799974	0.002690801	-0.000328178		
6P3/2			0.661461122	0.001171992	-0.000352121		
6D3/2			0.393321571	0.000019706	-0.000002220		
7S1/2			0.294852364	0.000197879	-0.000026435		
2S1/2 -- (2)	1534.938389	-2754.493450	15.815894594	0.257346653	-0.503374958	0.023194682	
2P1/2			15.834658514	0.078726953	-0.000094895		
2P3/2			14.307955604	0.107512639	-0.004070031		
3S1/2			7.489943251	0.031040051	-0.007463873		
3P1/2			8.254990508	0.053335190	-0.008192887		
3P3/2			7.421796794	0.031676180	-0.003546437		
3D3/2			8.254880454	0.029764622	-0.004064012		
3D5/2			7.940227110	0.012655948	-0.003996907		
4S1/2			3.797638292	0.008212805	-0.002081713		
4P1/2			3.936178756	0.014047957	-0.002219492		
4P3/2			3.541953620	0.008410317	-0.001065202		
4D3/2			3.598812562	0.006256648	-0.000903014		
4D5/2			3.477384117	0.002804621	-0.000907042		
4F5/2			3.310404627	0.000407343	-0.000053247		
4F7/2			3.255532488	0.000145609	-0.000051807		
5S1/2			1.857386048	0.002065137	-0.000529058		
5P1/2			1.819196287	0.003314754	-0.000526650		
5P3/2			1.631744177	0.001961441	-0.000254769		
5D3/2			1.465890492	0.001148174	-0.000167653		
5D5/2			1.415775376	0.000516579	-0.000167515		
5F5/2			0.851248422	0.000031932	-0.000004202		
6S1/2			0.832070935	0.000410338	-0.000105373		
6P1/2			0.747609619	0.000558090	-0.000088772		
6P3/2			0.650733063	0.000303413	-0.000039610		
6D3/2			0.391779545	0.000070167	-0.000010263		
7S1/2			0.292721462	0.000042586	-0.000010940		
2P1/2 -- (2)	1534.448008	-2754.332731	19.711753119	0.590892180	-0.080396665	0.005351418	
2P3/2			16.832203340	0.066621168	-0.000274760		
3S1/2			7.998909842	0.021161590	-0.001447898		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3P1/2			8.255533833	0.049656933	-0.007293076		
3P3/2			7.756676672	0.016552566	-0.000439472		
3D3/2			8.273828388	0.087216140	-0.020756998		
3D5/2			8.156331778	0.002514730	-0.000605959		
4S1/2			3.920306720	0.005582931	-0.000427229		
4P1/2			3.949057706	0.012222332	-0.001972168		
4P3/2			3.623583669	0.004251532	-0.000133289		
4D3/2			3.606415877	0.019568885	-0.004796399		
4D5/2			3.527627348	0.000662264	-0.000150425		
4F5/2			3.311412555	0.000468748	-0.000098268		
4F7/2			3.257625909	0.000025669	-0.000009813		
5S1/2			1.887605808	0.001402823	-0.000110097		
5P1/2			1.822826157	0.002844517	-0.000468084		
5P3/2			1.650462013	0.000985370	-0.000032003		
5D3/2			1.467441841	0.003641205	-0.000897778		
5D5/2			1.425107862	0.000126345	-0.000028315		
5F5/2			0.851328525	0.000036901	-0.000007777		
6S1/2			0.838047553	0.000278690	-0.000022000		
6P1/2			0.748241271	0.000477553	-0.000078907		
6P3/2			0.653618789	0.000152240	-0.000004980		
6D3/2			0.391875815	0.000222984	-0.000055028		
7S1/2			0.293341261	0.000028923	-0.000002285		
2P3/2 -- (4)	986.650749	-2047.145741	15.563308043	0.248977972		-0.003469749	0.000574655
3S1/2			7.723776151	0.025963286	-0.002124409		
3P1/2			8.311606382	0.015756652	-0.000746422		
3P3/2			7.332608847	0.031019550	-0.002906769		
3D3/2			8.320807462	0.026154803	-0.002518067		
3D5/2			7.852916174	0.042974333	-0.012220141		
4S1/2			3.849132935	0.006432251	-0.000561831		
4P1/2			3.949172199	0.003879170	-0.000211804		
4P3/2			3.524413095	0.007513070	-0.000781624		
4D3/2			3.614606335	0.005614411	-0.000544815		
4D5/2			3.461541295	0.009095125	-0.002675350		
4F5/2			3.310466693	0.000342203	-0.000033195		
4F7/2			3.254429845	0.000294017	-0.000095246		
5S1/2			1.869780572	0.001593768	-0.000141538		
5P1/2			1.822165583	0.000903508	-0.000050915		
5P3/2			1.627926860	0.001718538	-0.000182711		
5D3/2			1.468857424	0.001036833	-0.000100824		
5D5/2			1.412975612	0.001659960	-0.000491291		
5F5/2			0.851254583	0.000026712	-0.000002606		
6S1/2			0.834508784	0.000315608	-0.000028138		
6P1/2			0.748106139	0.000151716	-0.000008607		
6P3/2			0.650150920	0.000264802	-0.000028276		
6D3/2			0.391961481	0.000063426	-0.000006170		
7S1/2			0.292974048	0.000032737	-0.000002921		
3S1/2 -- (2)	490.451157	-1003.718242	6.004182334	0.016723872		-0.118118564	0.005389623
3P1/2			5.550798134	0.005698282	-0.000065924		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
3P3/2			5.195912196	0.008099766	-0.000859551		
3D3/2			5.968404767	0.005097662	-0.000179859		
3D5/2			5.860624393	0.006563852	-0.000226643		
4S1/2			3.309530869	0.002815796	-0.000992983		
4P1/2			3.426647944	0.003975337	-0.000687328		
4P3/2			3.123318957	0.002249184	-0.000282676		
4D3/2			3.193716430	0.001491449	-0.000144396		
4D5/2			3.110821011	0.001468490	-0.000120990		
4F5/2			3.179983229	0.001433836	-0.000201431		
4F7/2			3.135013837	0.000653076	-0.000196904		
5S1/2			1.741837893	0.000704247	-0.000257417		
5P1/2			1.703274487	0.000973297	-0.000173717		
5P3/2			1.537926673	0.000549149	-0.000073503		
5D3/2			1.392061942	0.000299056	-0.000031600		
5D5/2			1.349613873	0.000269577	-0.000026504		
5F5/2			0.841923411	0.000093014	-0.000013541		
6S1/2			0.809384818	0.000139676	-0.000051369		
6P1/2			0.728229724	0.000164790	-0.000029571		
6P3/2			0.636328592	0.000085610	-0.000011586		
6D3/2			0.387270875	0.000018487	-0.000001975		
7S1/2			0.290371496	0.000014491	-0.000006535		
3P1/2 -- (2)	485.169030	-996.621211	6.416654204	0.03348727		-0.021171891	0.001382113
3P3/2			5.716692560	0.003478866	-0.000048596		
3D3/2			5.849687453	0.011757259	-0.000973148		
3D5/2			6.164212136	0.004869224	-0.000044013		
4S1/2			3.425752409	0.002372640	-0.000284873		
4P1/2			3.370954269	0.004044320	-0.000925780		
4P3/2			3.178802972	0.001146709	-0.000067243		
4D3/2			3.216740809	0.003326517	-0.000488647		
4D5/2			3.149410978	0.001003257	-0.000033766		
4F5/2			3.171681457	0.002439131	-0.000538745		
4F7/2			3.164171660	0.000267774	-0.000057108		
5S1/2			1.766787770	0.000579347	-0.000075092		
5P1/2			1.694185030	0.000926686	-0.000224950		
5P3/2			1.549640264	0.000270663	-0.000017810		
5D3/2			1.396605630	0.000679356	-0.000108530		
5D5/2			1.356495905	0.000179328	-0.000007290		
5F5/2			0.841470944	0.000160406	-0.000036432		
6S1/2			0.814184010	0.000114335	-0.000015049		
6P1/2			0.726815968	0.000155071	-0.000038021		
6P3/2			0.638107821	0.000041939	-0.000002816		
6D3/2			0.387550900	0.000042105	-0.000006797		
7S1/2			0.290866993	0.000011853	-0.000001564		
3P3/2 -- (4)	346.855326	-809.731376	5.478582324	0.015496018		-0.000976590	0.000158610
3D3/2			5.841362189	0.003463924	-0.000019372		
3D5/2			5.561528238	0.008488177	-0.000163021		
4S1/2			3.348712177	0.003540151	-0.000463478		
4P1/2			3.402168416	0.001551443	-0.000118451		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
4P3/2			3.065671555	0.002649688	-0.000384786		
4D3/2			3.163225747	0.001362057	-0.000128933		
4D5/2			3.072997641	0.002897641	-0.000447678		
4F5/2			3.160314900	0.001237618	-0.000124461		
4F7/2			3.092931254	0.001193959	-0.000352747		
5S1/2			1.748610931	0.000809592	-0.000110948		
5P1/2			1.697511477	0.000351451	-0.000030086		
5P3/2			1.526072722	0.000595732	-0.000092774		
5D3/2			1.386633849	0.000265139	-0.000026492		
5D5/2			1.342936568	0.000544114	-0.000092390		
5F5/2			0.840630654	0.000077826	-0.000008094		
6S1/2			0.810614319	0.000157812	-0.000021837		
6P1/2			0.727259854	0.000058713	-0.000005134		
6P3/2			0.634536537	0.000091483	-0.000014416		
6D3/2			0.386940663	0.000016325	-0.000001642		
7S1/2			0.290497202	0.000016328	-0.000002263		
3D3/2 -- (4)	340.601091	-801.186416	6.387699823	0.026527052		-0.000018902	0.000004002
3D5/2			6.336555288	0.004799374	-0.000000445		
4S1/2			3.455036936	0.001295551	-0.000033771		
4P1/2			3.468869385	0.002646574	-0.000198947		
4P3/2			3.191933036	0.000892777	-0.000022954		
4D3/2			3.189483887	0.003097995	-0.0000304184		
4D5/2			3.174199547	0.001012987	-0.000014876		
4F5/2			3.146818331	0.005521987	-0.001368395		
4F7/2			3.173033978	0.000187819	-0.000022160		
5S1/2			1.773072853	0.000313205	-0.000010675		
5P1/2			1.713189653	0.000565393	-0.000045407		
5P3/2			1.552324289	0.000202628	-0.000006300		
5D3/2			1.392954750	0.000546493	-0.000059087		
5D5/2			1.360868352	0.000183166	-0.000003252		
5F5/2			0.840055075	0.000361929	-0.000091204		
6S1/2			0.815389119	0.000061720	-0.000002219		
6P1/2			0.729893678	0.000093421	-0.000007613		
6P3/2			0.638512370	0.000031174	-0.000001004		
6D3/2			0.387338488	0.000033214	-0.000003637		
7S1/2			0.290991340	0.000006397	-0.000000232		
3D5/2 -- (6)	314.552326	-763.005730	6.171342651	0.021825315		-0.000003220	0.000001035
4S1/2			3.431370348	0.001509073	-0.000033888		
4P1/2			3.473851746	0.001082445	-0.000016882		
4P3/2			3.158650328	0.001735298	-0.000075404		
4D3/2			3.237303770	0.000826766	-0.000016475		
4D5/2			3.108598264	0.002717695	-0.000191635		
4F5/2			3.206611298	0.001159067	-0.000085328		
4F7/2			3.109546262	0.003441178	-0.000957139		
5S1/2			1.767408145	0.000355301	-0.000010679		
5P1/2			1.713162003	0.000241249	-0.000005216		
5P3/2			1.545293309	0.000376197	-0.000018436		
5D3/2			1.399869964	0.000149215	-0.000003606		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5D5/2			1.350214977	0.000473058	-0.000036921		
5F5/2			0.843828540	0.000076992	-0.000005691		
6S1/2			0.814273930	0.000069652	-0.000002216		
6P1/2			0.729855420	0.000040183	-0.000030922		
6P3/2			0.637444375	0.000057385	-0.000002879		
6D3/2			0.387746613	0.000009100	-0.000000226		
7S1/2			0.290875771	0.000007213	-0.000000232		
4S1/2 -- (2)	167.977938	-430.296922	2.749944551	0.001589750		-0.031986243	0.001456005
4P1/2			2.450371107	0.000686252	-0.000031522		
4P3/2			2.320366108	0.000973662	-0.000188396		
4D3/2			2.489740147	0.000681854	-0.000062916		
4D5/2			2.448292528	0.000597775	-0.000071416		
4F5/2			2.551047730	0.000484791	-0.000040623		
4F7/2			2.530593733	0.000496625	-0.000041774		
5S1/2			1.564918102	0.000285933	-0.000124998		
5P1/2			1.545691329	0.000289656	-0.000056746		
5P3/2			1.406926899	0.000155654	-0.000031077		
5D3/2			1.285932489	0.000073961	-0.000008657		
5D5/2			1.249820827	0.000101164	-0.000008767		
5F5/2			0.806588796	0.000018600	-0.000001179		
6S1/2			0.776435128	0.000056683	-0.000025543		
6P1/2			0.702591994	0.000051430	-0.000010381		
6P3/2			0.616753725	0.000024899	-0.000004997		
6D3/2			0.380885706	0.000004570	-0.000000551		
7S1/2			0.286983245	0.000005878	-0.0000002659		
4P1/2 -- (2)	162.180043	-420.782265	2.767106339	0.002960244		-0.005712262	0.000371161
4P3/2			2.482751338	0.000289976	-0.000007799		
4D3/2			2.344382150	0.001669498	-0.000291905		
4D5/2			2.507412570	0.000360855	-0.000012059		
4F5/2			2.508772767	0.000787764	-0.000100564		
4F7/2			2.557862410	0.000359839	-0.000012043		
5S1/2			1.595290085	0.000317089	-0.000047048		
5P1/2			1.516160221	0.000357642	-0.000104566		
5P3/2			1.418001771	0.000092520	-0.000008062		
5D3/2			1.279303444	0.000141126	-0.000022734		
5D5/2			1.254122964	0.000073650	-0.000003002		
5F5/2			0.805955707	0.000029678	-0.000002375		
6S1/2			0.781349957	0.000060167	-0.000009463		
6P1/2			0.698551367	0.000059231	-0.000018132		
6P3/2			0.618227215	0.000014617	-0.000001387		
6D3/2			0.380536992	0.000008745	-0.000001421		
7S1/2			0.287477913	0.000006200	-0.000000983		
4P3/2 -- (4)	119.455759	-356.101426	2.399732910	0.001393059		-0.000263462	0.000042582
4D3/2			2.403696959	0.000383968	-0.000011583		
4D5/2			2.271038584	0.000879323	-0.000074484		
4F5/2			2.436086200	0.000325056	-0.000013776		
4F7/2			2.387588166	0.000556337	-0.000040567		
5S1/2			1.563451771	0.000506884	-0.000078333		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5P1/2			1.525525086	0.000159396	-0.000014866		
5P3/2			1.379396693	0.000232502	-0.000042750		
5D3/2			1.271126831	0.000064459	-0.000005803		
5D5/2			1.232466509	0.000156592	-0.000014892		
5F5/2			0.800612011	0.000014842	-0.000000672		
6S1/2			0.775587836	0.000090434	-0.000014597		
6P1/2			0.699247931	0.000025979	-0.000002667		
6P3/2			0.612814501	0.000035260	-0.000006852		
6D3/2			0.379982714	0.000004097	-0.000000395		
7S1/2			0.286886921	0.000009246	-0.000001502		
4D3/2 -- (4)	110.509562	-339.785422	2.424824984	0.001907098		-0.000005756	0.000001214
4D5/2			2.413043146	0.000345951	-0.000000069		
4F5/2			2.336709416	0.000988577	-0.000104815		
4F7/2			2.446392682	0.000301139	-0.000002098		
5S1/2			1.573697291	0.000160744	-0.000006351		
5P1/2			1.516454032	0.000374994	-0.000042618		
5P3/2			1.399855963	0.000091533	-0.000003994		
5D3/2			1.254690900	0.000215032	-0.000026298		
5D5/2			1.239787776	0.000066169	-0.000001370		
5F5/2			0.799578570	0.000045470	-0.000004063		
6S1/2			0.777346347	0.000029872	-0.000001506		
6P1/2			0.698293538	0.000056044	-0.000006670		
6P3/2			0.615505835	0.000013718	-0.000003671		
6D3/2			0.379111156	0.000012869	-0.000001669		
7S1/2			0.287065158	0.000003072	-0.000000160		
4D5/2 -- (6)	102.574205	-326.322849	2.361768612	0.001569160		-0.000000980	0.000000314
4F5/2			2.419815764	0.000272406	-0.000005446		
4F7/2			2.320338013	0.000829226	-0.000064652		
5S1/2			1.563664013	0.000187508	-0.000006220		
5P1/2			1.522033447	0.000112057	-0.000002620		
5P3/2			1.387254796	0.000203435	-0.000015746		
5D3/2			1.268975717	0.000056886	-0.000001566		
5D5/2			1.221826511	0.000186354	-0.000016454		
5F5/2			0.799580524	0.000012814	-0.000000479		
6S1/2			0.775567287	0.000033738	-0.000001496		
6P1/2			0.698711038	0.000017696	-0.000000551		
6P3/2			0.613779017	0.000029215	-0.000002373		
6D3/2			0.379850917	0.000003440	-0.000000108		
7S1/2			0.286882936	0.000003457	-0.000000159		
4F5/2 -- (6)	89.041182	-301.639690	2.449279509	0.001929368		-0.000000002	0.000000001
4F7/2			2.472843934	0.000309526	-0.000000002		
5S1/2			1.574568322	0.000097269	-0.000000059		
5P1/2			1.520724471	0.000134725	-0.000000631		
5P3/2			1.399396925	0.000063394	-0.000000234		
5D3/2			1.265224813	0.000127593	-0.000004830		
5D5/2			1.238721667	0.000042983	-0.000000378		
5F5/2			0.795774476	0.000072516	-0.000003258		
6S1/2			0.777603341	0.000018439	-0.000000122		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
6P1/2			0.699009786	0.0C0020955	-0.000000276		
6P3/2			0.615483241	0.000009512	-0.000000072		
6D3/2			0.379701233	0.0C0007345	-0.000000293		
7S1/2			0.287091068	0.000001901	-0.000000015		
4F7/2 -- (8)	86.364376	-296.597385	2.424385902	0.001766351		-0.000000001	0.000000000
5S1/2			1.569765555	0.000119447	-0.000000043		
5P1/2			1.525340682	0.000084707	-0.000000084		
5P3/2			1.392661862	0.000105519	-0.000000549		
5D3/2			1.270834782	0.000047801	-0.000000192		
5D5/2			1.230773875	0.000110906	-0.0000003139		
5F5/2			0.801805123	0.000015353	-0.000000099		
6S1/2			0.776743001	0.0C0021447	-0.000000119		
6P1/2			0.699319392	0.000013111	-0.000000060		
6P3/2			0.614607179	0.000015143	-0.000000153		
6D3/2			0.379967729	0.000002824	-0.000000016		
7S1/2			0.287002771	0.000002198	-0.000000014		
5S1/2 -- (2)	51.436433	-190.314112	1.313445595	0.000154210		-0.008094083	0.000368209
5P1/2			1.138112352	0.000104221	-0.000010202		
5P3/2			1.081432160	0.000134004	-0.000034230		
5D3/2			1.074482175	0.000094511	-0.000012330		
5D5/2			1.053905560	0.000051543	-0.000012694		
5F5/2			0.743613810	0.000025568	-0.000003259		
6S1/2			0.713422418	0.000023614	-0.000011741		
6P1/2			0.656609695	0.000014186	-0.000003260		
6P3/2			0.581223635	0.0C0009551	-0.000003105		
6D3/2			0.369702812	0.000003490	-0.000000548		
7S1/2			0.280762193	0.000002453	-0.000001248		
5P1/2 -- (2)	46.874525	-180.242633	1.261384494	0.000259427		-0.001359235	0.000088215
5P3/2			1.129872473	0.0C0024955	-0.000000954		
5D3/2			0.997046125	0.000238657	-0.000053741		
5D5/2			1.057623761	0.000020801	-0.000002046		
5F5/2			0.729888982	0.0C0042220	-0.000008586		
6S1/2			0.719296841	0.000036435	-0.000005819		
6P1/2			0.644491539	0.0C0023091	-0.000007843		
6P3/2			0.582464351	0.000005398	-0.000000570		
6D3/2			0.367315008	0.0C0006904	-0.000001767		
7S1/2			0.281240989	0.0C0003597	-0.000000596		
5P3/2 -- (4)	34.768685	-156.288403	1.093253564	0.000122132		-0.000061831	0.000009981
5D3/2			1.023668139	0.000047978	-0.000003350		
5D5/2			0.963748832	0.0C0090961	-0.000018246		
5F5/2			0.723834711	0.0C0019433	-0.000001782		
6S1/2			0.705149536	0.000056730	-0.0000039127		
6P1/2			0.646746235	0.000011691	-0.000001181		
6P3/2			0.570891501	0.000013807	-0.000002886		
6D3/2			0.367282370	0.000001541	-0.000000135		
7S1/2			0.279925601	0.0C0005342	-0.000000893		
5D3/2 -- (4)	27.050970	-135.727930	0.971876063	0.0C0123062		-0.000001139	0.000000240
5D5/2			0.966795969	0.000022382	-0.000000006		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PROTOACTINIUM 5F2 6D1 Z=91 A=231 R=1.39141E-04 A.U.							
5D5/2 -- (6)	25.000015	-130.689540	0.673071736	0.000066228	-0.000014853		
5F5/2			0.690058373	0.000014613	-0.000000466		
6S1/2			0.626321556	0.000034467	-0.000004062		
6P1/2			0.567262117	0.000006660	-0.000000369		
6P3/2			0.362154579	0.000004629	-0.000000580		
6D3/2			0.278583882	0.000001410	-0.000000065		
7S1/2			0.945618942	0.000100341		-0.000000192	0.000000061
5F5/2			0.698358330	0.000014740	-0.000000872		
6S1/2			0.684403382	0.000018353	-0.000000399		
6P1/2			0.631066676	0.000008679	-0.000000180		
6P3/2			0.561871231	0.000016283	-0.000001595		
6D3/2			0.364132674	0.000001246	-0.000000036		
7S1/2			0.278103457	0.000001650	-0.000000060		
5F5/2 -- (2)	9.648047	-77.494688	0.557677818	0.000029130		-0.000000000	0.000000000
6S1/2			0.565682527	0.000005731	-0.000000323		
6P1/2			0.522287003	0.000007150	-0.000000433		
6P3/2			0.490559329	0.000002719	-0.000000048		
6D3/2			0.331738161	0.000002431	-0.000000000		
7S1/2			0.265982667	0.000000524	-0.000000000		
6S1/2 -- (2)	12.028093	-79.948937	0.593564598	0.000012120		-0.001610714	0.000073262
6P1/2			0.494538886	0.000013583	-0.000001860		
6P3/2			0.462812393	0.000013373	-0.000003723		
6D3/2			0.341846562	0.000004055	-0.000000552		
7S1/2			0.264927534	0.000000936	-0.000000464		
6P1/2 -- (2)	9.429100	-70.504404	0.529426101	0.000016522		-0.000229288	0.000014877
6P3/2			0.466517959	0.000001535	-0.000000060		
6D3/2			0.321907030	0.000011262	-0.000002635		
7S1/2			0.264208551	0.000001990	-0.000000308		
6P3/2 -- (4)	6.539558	-60.420857	0.446112741	0.000007175		-0.0000009578	0.000001546
6D3/2			0.324412311	0.000002452	-0.000000242		
7S1/2			0.258317580	0.000002739	-0.000000400		
6D3/2 -- (1)	2.234015	-35.795155	0.000000000	0.000000000		-0.000000070	0.000000015
7S1/2			0.224887930	0.000003036	-0.000000004		
7S1/2 -- (2)	1.437857	-27.076704	0.212600659	0.000000478		-0.000167207	0.000007605
ETOT	-27245.58124	33149.35610	-70166.22535	9742.73589	40.389963159	-4.266253584	-7.965775541
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
1S1/2 -- (2)	6395.281662	-11248.950787	70.288832054	11.977833744		-3.401779568	0.171099140
2S1/2			22.155263970	0.670953431	-0.082480389		
2P1/2			27.625507713	1.383978793	-0.171786494		
2P3/2			21.691478034	0.579095658	-0.167280424		
3S1/2			9.268531114	0.148711147	-0.019525093		
3P1/2			10.391462372	0.279857296	-0.034033597		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
3P3/2			8.756383154	0.132352795	-0.039406402		
3D3/2			8.923041910	0.005836548	-0.000650817		
3D5/2			8.490342629	0.002290444	-0.000733023		
4S1/2			4.292456800	0.039861684	-0.005309638		
4P1/2			4.515332976	0.071447396	-0.008648555		
4P3/2			3.908560144	0.034180738	-0.010247591		
4D3/2			3.798792861	0.001703597	-0.000190668		
4D5/2			3.646038640	0.000668808	-0.000216085		
4F5/2			3.381642953	0.000005333	-0.000000544		
4F7/2			3.324122764	0.000002057	-0.000000677		
5S1/2			2.008252455	0.010179860	-0.001361003		
5P1/2			1.984880941	0.017011547	-0.002056845		
5P3/2			1.741176949	0.068051310	-0.002417932		
5D3/2			1.533375012	0.000341929	-0.000038303		
5D5/2			1.475527899	0.000132968	-0.000043049		
5F5/2			0.909921306	0.000000485	-0.000000050		
6S1/2			0.875303179	0.002037947	-0.000272706		
6P1/2			0.788873411	0.002880423	-0.000348181		
6P3/2			0.676766332	0.001243222	-0.000373492		
6D3/2			0.400649541	0.000020594	-0.000002307		
7S1/2			0.299963759	0.000205862	-0.000027551		
2S1/2 -- (2)	1593.235202	-2845.505954	16.087192096	0.269727828		-0.539900413	0.025359653
2P1/2			16.121041329	0.082537774	-0.000096534		
2P3/2			14.519647899	0.111814699	-0.004418087		
3S1/2			7.615726093	0.032570016	-0.007821397		
3P1/2			8.400771850	0.056068565	-0.008599506		
3P3/2			7.529474572	0.032720740	-0.003634563		
3D3/2			8.376804219	0.030973226	-0.004225433		
3D5/2			8.049603967	0.013139328	-0.004154341		
4S1/2			3.866767572	0.008654232	-0.002191053		
4P1/2			4.011879507	0.014836338	-0.002340168		
4P3/2			3.603856385	0.008748651	-0.001100928		
4D3/2			3.663616690	0.006571257	-0.000947546		
4D5/2			3.537596144	0.002940274	-0.000952328		
4F5/2			3.377220386	0.000430076	-0.000056164		
4F7/2			3.320261989	0.000153582	-0.000054651		
5S1/2			1.900475042	0.002204481	-0.000564162		
5P1/2			1.865210565	0.003555325	-0.000563939		
5P3/2			1.669152526	0.002073461	-0.000267725		
5D3/2			1.537110107	0.001235465	-0.000180260		
5D5/2			1.454685089	0.000554915	-0.000180235		
5F5/2			0.909531113	0.000037585	-0.000004942		
6S1/2			0.853769482	0.000441048	-0.000113147		
6P1/2			0.768617448	0.000602781	-0.000095724		
6P3/2			0.665659198	0.000320550	-0.000041606		
6D3/2			0.399075395	0.000073673	-0.000010769		
7S1/2			0.297789245	0.000044548	-0.000011433		
2P1/2 -- (2)	1593.220474	-2845.945157	29.081239563	0.619838015		-0.088887437	0.006020385

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
2P3/2			17.085376771	0.068849829	-0.000300378		
3S1/2			8.138251059	0.022210954	-0.001513278		
3P1/2			8.402147077	0.052193767	-0.007646669		
3P3/2			7.871677155	0.017187264	-0.000455796		
3D3/2			8.397279966	0.090596852	-0.021560036		
3D5/2			8.267750368	0.002594684	-0.000628043		
4S1/2			3.993301703	0.005885930	-0.000448669		
4P1/2			4.025363192	0.012910572	-0.002078470		
4P3/2			3.684764455	0.004443362	-0.000139100		
4D3/2			3.671679863	0.020521196	-0.005029367		
4D5/2			3.588831994	0.000689755	-0.000157440		
4F5/2			3.378266200	0.000493559	-0.000103446		
4F7/2			3.322410514	0.000026974	-0.000010320		
5S1/2			1.932052511	0.001498291	-0.000117161		
5P1/2			1.869065782	0.003051424	-0.000501090		
5P3/2			1.688697151	0.001046359	-0.000033944		
5D3/2			1.508792769	0.003912960	-0.000964773		
5D5/2			1.464438722	0.000134897	-0.000030376		
5F5/2			0.909623809	0.000043324	-0.000009131		
6S1/2			0.860057331	0.000299713	-0.000023576		
6P1/2			0.769293203	0.000515850	-0.000085067		
6P3/2			0.668670219	0.000161558	-0.000005279		
6D3/2			0.399177293	0.000233842	-0.000057708		
7S1/2			0.298423854	0.000030271	-0.000002384		
2P3/2 -- (4)	1011.303030	-2096.014599	15.758873208	0.257858849		-0.003708925	0.000628602
3S1/2			7.848439183	0.027203645	-0.002243521		
3P1/2			8.449542344	0.016483817	-0.000782895		
3P3/2			7.433068610	0.032217154	-0.003022286		
3D3/2			8.438935488	0.027199596	-0.002613705		
3D5/2			7.956759189	0.044638433	-0.012694042		
4S1/2			3.918003179	0.006758708	-0.000594383		
4P1/2			4.022968960	0.004074232	-0.000222986		
4P3/2			3.581482087	0.007846981	-0.000817424		
4D3/2			3.678716452	0.005880711	-0.000569467		
4D5/2			3.520449175	0.009523411	-0.002801921		
4F5/2			3.377215396	0.000364480	-0.000035320		
4F7/2			3.319054849	0.000312875	-0.000101377		
5S1/2			1.912948135	0.001695809	-0.000151614		
5P1/2			1.867772853	0.000963524	-0.000054441		
5P3/2			1.664853098	0.001823108	-0.000194128		
5D3/2			1.510018673	0.001112313	-0.000107939		
5D5/2			1.451575811	0.001780214	-0.000027051		
5F5/2			0.909532251	0.000031705	-0.000003090		
6S1/2			0.856238456	0.000338088	-0.000030346		
6P1/2			0.769048427	0.000162912	-0.000009268		
6P3/2			0.665003552	0.000280703	-0.000030024		
6D3/2			0.399249465	0.000066394	-0.000006445		
7S1/2			0.298038186	0.000034129	-0.000003065		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
3S1/2 -- (2)	509.068806	-1035.794924	6.103563176	0.017567690		-0.126995229	0.005906173
3P1/2			5.645466484	0.005979108	-0.000067434		
3P3/2			5.274622725	0.008481127	-0.000928465		
3D3/2			6.061008982	0.005336598	-0.000191099		
3D5/2			5.948650237	0.006846977	-0.000241587		
4S1/2			3.367597046	0.002969472	-0.001045991		
4P1/2			3.489579092	0.004211667	-0.000727410		
4P3/2			3.173666184	0.002328174	-0.000294119		
4D3/2			3.249769636	0.001561915	-0.000151022		
4D5/2			3.163937572	0.001541688	-0.000126127		
4F1/2			3.243453135	0.001517151	-0.000213173		
4F7/2			3.196854540	0.000690462	-0.000208375		
5S1/2			1.780790969	0.000752300	-0.000274713		
5P1/2			1.744538875	0.001047149	-0.000186721		
5P3/2			1.571914355	0.000577939	-0.000077664		
5D3/2			1.429850956	0.000321297	-0.000033946		
5D5/2			1.385607222	0.000290005	-0.000028381		
5F5/2			0.898897431	0.000109080	-0.000015901		
6S1/2			0.830113058	0.000150230	-0.000055201		
6P1/2			0.748304491	0.000178541	-0.000032011		
6P3/2			0.650741274	0.000090063	-0.000012237		
6D3/2			0.394471585	0.000019389	-0.000002072		
7S1/2			0.295404432	0.000015169	-0.000005579		
3P1/2 -- (2)	503.786471	-1028.724991	6.527702666	0.035167017		-0.023466727	0.001558060
3P3/2			5.804480859	0.003594021	-0.000053494		
3D3/2			5.941382753	0.012352341	-0.001042351		
3D5/2			6.258363438	0.005072722	-0.000047223		
4S1/2			3.486921586	0.002497959	-0.000299342		
4P1/2			3.432860809	0.004273623	-0.000976940		
4P3/2			3.230785201	0.001191924	-0.000070554		
4D3/2			3.273577152	0.003465894	-0.000507190		
4D5/2			3.203656786	0.001056162	-0.000035364		
4F5/2			3.235187192	0.002580429	-0.000570130		
4F7/2			3.226905207	0.000282657	-0.000060418		
5S1/2			1.806731832	0.000617932	-0.000079984		
5P1/2			1.735185911	0.000994425	-0.000241125		
5P3/2			1.584157114	0.000286040	-0.000018992		
5D3/2			1.434669156	0.000726516	-0.000115812		
5D5/2			1.392858405	0.000193411	-0.000007836		
5F5/2			0.898404576	0.000188210	-0.000042798		
6S1/2			0.835135154	0.000122782	-0.000016143		
6P1/2			0.746843143	0.000167551	-0.000041043		
6P3/2			0.652599027	0.000044299	-0.000003002		
6D3/2			0.394761408	0.000043960	-0.000007084		
7S1/2			0.295909032	0.000012388	-0.000001633		
3P3/2 -- (4)	356.618286	-830.369994	5.553800473	0.016129565		-0.001048641	0.000174204
3D3/2			5.923132161	0.003603655	-0.000019758		
3D5/2			5.637209887	0.008825862	-0.000169221		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
4S1/2			3.405824466	0.003746813	-0.000492648		
4P1/2			3.462401769	0.001640071	-0.000125462		
4P3/2			3.113596228	0.002774859	-0.000403445		
4D3/2			3.216960239	0.001435542	-0.000135998		
4D5/2			3.123793325	0.003042744	-0.000470903		
4F5/2			3.222084045	0.001308528	-0.000131560		
4F7/2			3.152500981	0.001262835	-0.000372938		
5S1/2			1.787361826	0.000866010	-0.000119196		
5P1/2			1.738076120	0.000376715	-0.000032337		
5P3/2			1.559347738	0.000633593	-0.000098833		
5D3/2			1.423865456	0.000286299	-0.000028637		
5D5/2			1.378344319	0.000585315	-0.000099663		
5F5/2			0.897338547	0.000090987	-0.000009472		
6S1/2			0.831305750	0.000169865	-0.000023610		
6P1/2			0.747210266	0.000063350	-0.000005557		
6P3/2			0.648842684	0.000097217	-0.000015347		
6D3/2			0.394116287	0.000017203	-0.000001733		
7S1/2			0.295522966	0.000017103	-0.000002381		
3D3/2 -- (4)	350.289538	-821.752710	6.479452171	0.027633474		-0.000020887	0.000004527
3D5/2			6.424553736	0.004990114	-0.000000486		
4S1/2			3.514932435	0.001361278	-0.000035578		
4P1/2			3.531150360	0.002792218	-0.000211256		
4P3/2			3.242672409	0.000934649	-0.000024058		
4D3/2			3.244258026	0.003251960	-0.000320096		
4D5/2			3.227557048	0.001062582	-0.000015637		
4F5/2			3.208603293	0.005845100	-0.001448676		
4F7/2			3.235282913	0.000199049	-0.000023463		
5S1/2			1.812764574	0.003333173	-0.000011408		
5P1/2			1.754477848	0.000604734	-0.000048877		
5P3/2			1.586590966	0.000215478	-0.000006720		
5D3/2			1.430586077	0.000587231	-0.000063716		
5D5/2			1.397170402	0.000196781	-0.000003509		
5F5/2			0.896724700	0.000424477	-0.000107045		
6S1/2			0.836296552	0.000066093	-0.000002390		
6P1/2			0.749984502	0.000100563	-0.000008249		
6P3/2			0.652964399	0.000033126	-0.000001071		
6D3/2			0.394529158	0.000034818	-0.000003827		
7S1/2			0.296025607	0.000006667	-0.000000243		
3D5/2 -- (6)	322.908248	-781.673855	6.254232939	0.022690726		-0.000003528	0.000001163
4S1/2			3.490131250	0.001584045	-0.000035693		
4P1/2			3.535577840	0.001137335	-0.000017784		
4P3/2			3.208245515	0.001814708	-0.000079046		
4D3/2			3.292531918	0.000867079	-0.000017344		
4D5/2			3.160074599	0.002847411	-0.000201382		
4F5/2			3.269883458	0.001227336	-0.000090269		
4F7/2			3.169649969	0.003641640	-0.001012946		
5S1/2			1.806753302	0.000377418	-0.000011409		
5P1/2			1.754281097	0.000257207	-0.000005595		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
5P3/2			1.579201095	0.000399389	-0.000019642		
5D3/2			1.437689866	0.000160252	-0.000003896		
5D5/2			1.385954708	0.000507283	-0.000039756		
5F5/2			0.901002725	0.000090353	-0.000006674		
6S1/2			0.835105275	0.000074472	-0.000002388		
6P1/2			0.749915404	0.000043128	-0.000000997		
6P3/2			0.651842822	0.000060864	-0.000003066		
6D3/2			0.394937546	0.000009535	-0.000000238		
7S1/2			0.295905462	0.000007505	-0.000000243		
4S1/2 -- (2)	174.905194	-444.289725	2.798757222	0.001679898		-0.034546695	0.001602762
4P1/2			2.495086383	0.000721201	-0.000032480		
4P3/2			2.359758740	0.001034157	-0.000203137		
4D3/2			2.533781141	0.000719676	-0.000066591		
4D5/2			2.490839319	0.000628464	-0.000075787		
4F5/2			2.603879887	0.000511712	-0.000042703		
4F7/2			2.579768215	0.000525523	-0.000043965		
5S1/2			1.598599118	0.000306310	-0.000133988		
5P1/2			1.581540668	0.000314038	-0.000061466		
5P3/2			1.436920085	0.000164825	-0.000033499		
5D3/2			1.319290006	0.000079885	-0.000009400		
5D5/2			1.281748678	0.000108926	-0.000009526		
5F5/2			0.858946097	0.000021830	-0.000001380		
6S1/2			0.795968803	0.000061127	-0.000027562		
6P1/2			0.721611380	0.000056147	-0.000011324		
6P3/2			0.630590365	0.000026327	-0.000005371		
6D3/2			0.387982629	0.000004819	-0.000000584		
7S1/2			0.291987476	0.000006169	-0.000002792		
4P1/2 -- (2)	169.028604	-434.703935	2.818499826	0.003133381		-0.006365153	0.000420588
4P3/2			2.525502208	0.000301953	-0.000008669		
4D3/2			2.386843619	0.001770846	-0.000311303		
4D5/2			2.551829013	0.000378224	-0.000012896		
4F5/2			2.558716419	0.000832634	-0.000105978		
4F7/2			2.608513637	0.000381292	-0.000012717		
5S1/2			1.630094252	0.000338323	-0.000050232		
5P1/2			1.551233464	0.000384847	-0.000112676		
5P3/2			1.448547971	0.000097780	-0.000008668		
5D3/2			1.312524367	0.000152270	-0.000024756		
5D5/2			1.286349804	0.000079246	-0.000003271		
5F5/2			0.858307015	0.000034873	-0.000002782		
6S1/2			0.801094234	0.000064618	-0.000010177		
6P1/2			0.717453090	0.000064163	-0.000019671		
6P3/2			0.632136668	0.000015448	-0.000001490		
6D3/2			0.387637452	0.000009205	-0.000001509		
7S1/2			0.292489531	0.000006480	-0.000001029		
4P3/2 -- (4)	123.507286	-366.106976	2.438076101	0.001462494		-0.000284718	0.000047063
4D3/2			2.444091716	0.000401823	-0.000011905		
4D5/2			2.308679273	0.000922546	-0.000077424		
4F5/2			2.481043531	0.000341273	-0.000014213		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
4F7/2			2.431586023	0.000586279	-0.000041924		
5S1/2			1.596455738	0.000546155	-0.000084583		
5P1/2			1.560079086	0.000172359	-0.000016103		
5P3/2			1.408250096	0.000248252	-0.000045823		
5D3/2			1.303535608	0.000070190	-0.000006365		
5D5/2			1.263427284	0.000169814	-0.000016299		
5F5/2			0.852050192	0.000017643	-0.000000817		
6S1/2			0.794971476	0.000097841	-0.000015836		
6P1/2			0.718035336	0.000028231	-0.000002907		
6P3/2			0.626491378	0.000037612	-0.000007338		
6D3/2			0.387045394	0.000004358	-0.000000423		
7S1/2			0.291878400	0.000009732	-0.000001585		
4D3/2 -- (4)	114.481121	-349.736346	2.467630212	0.002009353		-0.000006420	0.000001385
4D5/2			2.454938298	0.000363643	-0.000000076		
4F5/2			2.382266880	0.001038504	-0.000108412		
4F7/2			2.493516134	0.000318858	-0.000002181		
5S1/2			1.637591784	0.000171871	-0.000006837		
5P1/2			1.551244139	0.000403815	-0.0000046103		
5P3/2			1.424690585	0.000097597	-0.000004274		
5D3/2			1.286807667	0.000232209	-0.000028627		
5D5/2			1.271291668	0.000071359	-0.000001493		
5F5/2			0.851041680	0.000054565	-0.000005066		
6S1/2			0.796891678	0.000032125	-0.000001633		
6P1/2			0.717132814	0.000060626	-0.000007252		
6P3/2			0.629309801	0.000014615	-0.000000719		
6D3/2			0.386184667	0.000013555	-0.000001773		
7S1/2			0.292067837	0.000003215	-0.000000169		
4D5/2 -- (6)	106.116079	-335.601412	2.402142490	0.001650878		-0.000001084	0.000000356
4F5/2			2.465840441	0.000286403	-0.000005586		
4F7/2			2.364565837	0.000872362	-0.000066510		
5S1/2			1.597070315	0.000200316	-0.000006694		
5P1/2			1.556798103	0.000120167	-0.000002829		
5P3/2			1.416611969	0.000216829	-0.000016836		
5D3/2			1.301490993	0.000061393	-0.000001731		
5D5/2			1.252556261	0.000200859	-0.000017893		
5F5/2			0.850952885	0.000015243	-0.000000592		
6S1/2			0.795014436	0.000036235	-0.000001623		
6P1/2			0.717527433	0.000019082	-0.000000601		
6P3/2			0.627518505	0.000031096	-0.000002536		
6D3/2			0.386922991	0.000003622	-0.000000116		
7S1/2			0.291880707	0.000003613	-0.000000168		
4F5/2 -- (6)	92.582928	-311.111837	2.501374159	0.002049356		-0.000000003	0.000000001
4F7/2			2.525232855	0.000329028	-0.000000002		
5S1/2			1.609719417	0.000104062	-0.000000074		
5P1/2			1.556867934	0.000144633	-0.000000725		
5P3/2			1.436095843	0.000067805	-0.000000265		
5D3/2			1.298507992	0.000137709	-0.000005269		
5D5/2			1.270825791	0.000046444	-0.000000415		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.							
			0.847036807	0.000085044	-0.000003922		
			0.797367365	0.000019851	-0.000000137		
			0.718044561	0.000022632	-0.000000308		
			0.629409317	0.000010164	-0.000000080		
			0.386822344	0.000007730	-0.000000311		
			0.292114765	0.000001991	-0.000000016		
4F7/2 -- (8)	89.756146	-305.819852	2.475428283	0.001875314		-0.000000031	0.000000000
			1.604726335	0.000127548	-0.000000056		
5P1/2			1.561443317	0.000090791	-0.000000097		
5P3/2			1.423186506	0.000112592	-0.000000619		
5D3/2			1.304180957	0.000051611	-0.000000214		
5D5/2			1.262607654	0.000119503	-0.000000347		
5F5/2			0.853747559	0.000018047	-0.000000120		
6S1/2			0.796465488	0.000023056	-0.000000133		
6P1/2			0.718344281	0.000014147	-0.000000067		
6P3/2			0.628507214	0.000016150	-0.000000169		
6D3/2			0.387084546	0.000002975	-0.000000018		
7S1/2			0.292024663	0.000002300	-0.000000016		
5S1/2 -- (2)	54.207160	-197.392010	1.342698941	0.000165722		-0.008857021	0.000410650
			1.164542688	0.000110539	-0.000010670		
5P3/2			1.105494733	0.000145526	-0.000037286		
5D3/2			1.101403983	0.000101813	-0.000013262		
5D5/2			1.080074442	0.000055681	-0.000013685		
5F5/2			0.788059171	0.000029935	-0.000003818		
6S1/2			0.731315415	0.000025635	-0.000012769		
6P1/2			0.674272929	0.000015634	-0.000003587		
6P3/2			0.594408041	0.000010304	-0.000003377		
6D3/2			0.376747809	0.000003649	-0.000000574		
7S1/2			0.285773935	0.000002592	-0.000001321		
5P1/2 -- (2)	49.553463	-187.247335	1.291655600	0.000280113		-0.001538585	0.000101541
			1.155695448	0.000026545	-0.000001088		
5D3/2			1.022663754	0.000258409	-0.000038168		
5D5/2			1.084511137	0.000022485	-0.000002223		
5F5/2			0.772976600	0.000049305	-0.000010021		
6S1/2			0.737539239	0.000039273	-0.000006285		
6P1/2			0.661906359	0.000025201	-0.000008586		
6P3/2			0.595775134	0.000005726	-0.000000618		
6D3/2			0.374395721	0.000007259	-0.000001861		
7S1/2			0.286270932	0.000003777	-0.000000627		
5P3/2 -- (4)	36.495248	-161.730979	1.117022329	0.000130872		-0.000067899	0.000011209
			1.048754410	0.000051088	-0.000003523		
5D3/2			0.987102093	0.000097389	-0.000019328		
5F5/2			0.765759720	0.000022443	-0.000002046		
6S1/2			0.722666636	0.000061988	-0.000009982		
6P1/2			0.663961278	0.000012875	-0.000001302		
6P3/2			0.583825510	0.000014839	-0.000003114		
6D3/2			0.374297835	0.000001606	-0.000000141		
7S1/2			0.284924687	0.000005680	-0.000000950		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
URANIUM 5F3 6D1 Z=92 A=238 R=1.40533E-04 A.U.								
5D3/2 -- (4)	28.652272	-141.120350	0.997877711	0.000133733		-0.000001303	0.000000281	
5D5/2			0.992397948	0.000024244	-0.000030007			
5F5/2			0.710837142	0.000075772	-0.000016874			
6S1/2			0.707981643	0.000015941	-0.000000521			
6P1/2			0.643548034	0.000037800	-0.000004486			
6P3/2			0.580524739	0.000007158	-0.000000399			
6D3/2			0.369264277	0.000004928	-0.000000622			
7S1/2			0.283651281	0.000001497	-0.000000070			
5D5/2 -- (6)	26.444953	-135.781613	0.970440682	0.000108873		-0.000000218	0.000000071	
5F5/2			0.738303378	0.000016913	-0.000000985			
6S1/2			0.702101465	0.000019952	-0.000000446			
6P1/2			0.648284324	0.000009469	-0.000000200			
6P3/2			0.575042184	0.000017496	-0.000001724			
6D3/2			0.371226210	0.000001325	-0.000000038			
7S1/2			0.283163945	0.000001748	-0.000000064			
5F5/2 -- (3)	10.958723	-83.712823	0.598808749	0.000035498		-0.000000000	0.000000000	
6S1/2			0.592856097	0.000006411	-0.000000329			
6P1/2			0.547148778	0.000008014	-0.000000422			
6P3/2			0.510859215	0.000003012	-0.000000043			
6D3/2			0.342458073	0.000002689	-0.000000001			
7S1/2			0.272697154	0.000000574	-0.000000000			
6S1/2 -- (2)	12.755267	-83.057929	0.608681034	0.000013122		-0.001774792	0.000082274	
6P1/2			0.507610142	0.000014526	-0.000001979			
6P3/2			0.473932028	0.000014558	-0.000004050			
6D3/2			0.348704701	0.000004324	-0.000000588			
7S1/2			0.269966334	0.000000987	-0.000000488			
6P1/2 -- (2)	10.030012	-73.363386	0.543906964	0.000017974		-0.000261381	0.000017246	
6P3/2			0.478063068	0.000001637	-0.000000068			
6D3/2			0.328593487	0.000012031	-0.000002814			
7S1/2			0.269309177	0.000002086	-0.000000323			
6P3/2 -- (4)	6.859684	-62.500944	0.456206487	0.000007684		-0.000010512	0.000001735	
6D3/2			0.330731612	0.000002589	-0.000000255			
7S1/2			0.263172611	0.000002901	-0.000000422			
6D3/2 -- (1)	2.315230	-36.862762	0.300000000	0.000000000		-0.000000079	0.000000017	
7S1/2 -- (2)	1.483796	-27.852253	0.228851593	0.000000353	-0.000000004			
			0.216502116	0.000000504		-0.000179307	0.000008312	
ETOT	-28023.03662	34287.49189	-72342.56071	10032.49232	42.036707716	-4.435742470	-8.489730915	0.428659161
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.								
1S1/2 -- (2)	6615.175706	-11593.473511	71.483812996	12.431827311		-3.616640546	0.185471470	
2S1/2			22.555128276	0.699096595	-0.086106772			
2P1/2			28.180842259	1.441211897	-0.177523801			
2P3/2			21.971263798	0.598344711	-0.172826181			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
3S1/2			9.434650856	0.155148439	-0.020405580		
3P1/2			10.592732631	0.291492088	-0.035136306		
3P3/2			8.881268845	0.137362073	-0.040892021		
3D3/2			9.051303131	0.006033332	-0.000668840		
3D5/2			8.602196228	0.002365007	-0.000756718		
4S1/2			4.374339155	0.041759356	-0.005571923		
4P1/2			4.608131950	0.074753829	-0.008966583		
4P3/2			3.973764115	0.035690070	-0.010698740		
4D3/2			3.866515454	0.001776808	-0.000197691		
4D5/2			3.707932600	0.000697133	-0.000225191		
4F5/2			3.448234435	0.000005624	-0.000000570		
4F7/2			3.388533082	0.000002173	-0.000000715		
5S1/2			2.055807640	0.010793970	-0.001445604		
5P1/2			2.036547295	0.018054456	-0.002162936		
5P3/2			1.780596637	0.008528989	-0.002561112		
5D3/2			1.574799221	0.000364721	-0.000040612		
5D5/2			1.514166729	0.000141723	-0.000045875		
5F5/2			0.961452317	0.000000558	-0.000000057		
6S1/2			0.897179087	0.002169819	-0.000290859		
6P1/2			0.809960310	0.003067740	-0.000367417		
6P3/2			0.690854171	0.001311143	-0.000393858		
6D3/2			0.406831401	0.000021349	-0.000002378		
7S1/2			0.304857748	0.000214169	-0.000028713		
2S1/2 -- (2)	1654.027403	-2939.738475	16.363536835	0.282693722		-0.579408552	0.027724551
2P1/2			16.413287747	0.086529278	-0.000098267		
2P3/2			14.733548452	0.116269667	-0.004795914		
3S1/2			7.743392427	0.034170935	-0.008194300		
3P1/2			8.548928041	0.058928013	-0.009023655		
3P3/2			7.637835582	0.033777788	-0.003721495		
3D3/2			8.499465432	0.032215682	-0.004391071		
3D5/2			8.159319631	0.013633900	-0.004315762		
4S1/2			3.936789791	0.009117101	-0.002305380		
4P1/2			4.088592714	0.015662864	-0.002466243		
4P3/2			3.660064345	0.009093518	-0.001136646		
4D3/2			3.728669192	0.006897337	-0.000993597		
4D5/2			3.597911581	0.003080288	-0.000999182		
4F5/2			3.443704413	0.000453236	-0.000059130		
4F7/2			3.384590299	0.000161686	-0.000057543		
5S1/2			1.943678651	0.002350533	-0.000600856		
5P1/2			1.911261892	0.003807439	-0.000602890		
5P3/2			1.706108009	0.002187055	-0.000280646		
5D3/2			1.547416746	0.001325088	-0.000193176		
5D5/2			1.492553472	0.000594013	-0.000193248		
5F5/2			0.961016797	0.000043147	-0.000005668		
6S1/2			0.874683638	0.000472207	-0.000121008		
6P1/2			0.788678903	0.000647806	-0.000102700		
6P3/2			0.679418284	0.000336634	-0.000043431		
6D3/2			0.435236590	0.000076776	-0.000011213		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
2P1/2 -- 7S1/2	1654.449012	-2940.733220	0.302638079	0.000046604	-0.000011947	-0.098300060	0.006770601
(2)			20.458751603	0.650161313			
2P3/2			17.341123019	0.071118850	-0.000328160		
3S1/2			8.279893872	0.023309583	-0.001581215		
3P1/2			8.551149346	0.054852980	-0.008015354		
3P3/2			7.987490575	0.017837215	-0.000472540		
3D3/2			8.521498576	0.094056541	-0.022381638		
3D5/2			8.379417907	0.002675272	-0.000650529		
4S1/2			4.067312183	0.006203900	-0.000470996		
4P1/2			4.102696604	0.013633797	-0.002189617		
4P3/2			3.746295499	0.004640926	-0.000145077		
4D3/2			3.737204147	0.021503950	-0.005269648		
4D5/2			3.650123850	0.000717699	-0.000164644		
4F5/2			3.444787464	0.000518697	-0.000108690		
4F7/2			3.386791351	0.000028289	-0.000010831		
5S1/2			1.976645848	0.001598448	-0.000124520		
5P1/2			1.915348269	0.003268696	-0.000535582		
5P3/2			1.726482279	0.001108841	-0.000035929		
5D3/2			1.549233791	0.004190875	-0.001033262		
5D5/2			1.502711902	0.000143484	-0.000032469		
5F5/2			0.961121406	0.000049605	-0.000010454		
6S1/2	1036.324989	-2145.551206	0.881274923	0.000321068	-0.000025163	-0.003961922	0.000686989
6P1/2			0.789397882	0.000554510	-0.000091248		
6P3/2			0.682543031	0.000170449	-0.000005564		
6D3/2			0.405343505	0.000243362	-0.000060057		
7S1/2			0.303288092	0.000031687	-0.000002486		
2P3/2 -- (4)			15.955001487	0.266953804			
3S1/2			7.974623994	0.028500011	-0.002369088		
3P1/2			8.589166943	0.017241130	-0.000820860		
3P3/2			7.533867199	0.033446453	-0.003140973		
3D3/2			8.557508961	0.028272730	-0.002711618		
3D5/2			8.060721325	0.046344475	-0.013179912		
4S1/2			3.987660427	0.007099674	-0.000628649		
4P1/2			4.097586159	0.004277383	-0.000234631		
4P3/2			3.638750473	0.008191074	-0.000854357		
4D3/2			3.742992089	0.006155236	-0.000594787		
4D5/2			3.579392818	0.009964746	-0.002932370		
4F5/2			3.443625652	0.000387598	-0.000037521		
4F7/2			3.383272934	0.000332411	-0.000107730		
5S1/2			1.956191534	0.001802225	-0.000162218		
5P1/2			1.913355103	0.001025912	-0.000058111		
5P3/2			1.701293718	0.001930180	-0.000205840		
5D3/2			1.550238613	0.001189289	-0.000115163		
5D5/2			1.489117761	0.001902491	-0.000563429		
5F5/2			0.961011161	0.000036711	-0.000003575		
6S1/2			0.877169357	0.000360738	-0.000032599		
6P1/2			0.789031617	0.000174060	-0.000009928		
6P3/2			0.678686951	0.000295846	-0.000031694		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
6D3/2			0.405400709	0.000068972	-0.000006681		
7S1/2			0.302882956	0.000035581	-0.000003217		
3S1/2 -- (2)	528.419868	-1068.872897	6.204318997	0.018451157		-0.136609609	0.006471349
3P1/2			5.741501605	0.006273071	-0.000068993		
3P3/2			5.354026404	0.008880610	-0.001003008		
3D3/2			6.154446840	0.005585587	-0.000293137		
3D5/2			6.037339699	0.007139548	-0.000257606		
4S1/2			3.426348018	0.003130554	-0.001101400		
4P1/2			3.553258183	0.004459793	-0.000769415		
4P3/2			3.224249263	0.002407715	-0.000305930		
4D3/2			3.306055640	0.001634042	-0.000157770		
4D5/2			3.217196406	0.001617319	-0.000131329		
4F5/2			3.306690472	0.001603206	-0.000225299		
4F7/2			3.258401631	0.000728933	-0.000220217		
5S1/2			1.819829337	0.000802662	-0.000292794		
5P1/2			1.785802375	0.001124722	-0.000200360		
5P3/2			1.605491440	0.000606773	-0.000081900		
5D3/2			1.466812622	0.000343929	-0.000036327		
5D5/2			1.420664592	0.000310884	-0.000030268		
5F5/2			0.949181933	0.000124884	-0.000018227		
6S1/2			0.850106581	0.000160940	-0.000059079		
6P1/2			0.767487271	0.000192451	-0.000034475		
6P3/2			0.664052192	0.000094160	-0.000012848		
6D3/2			0.400569862	0.000020173	-0.000002156		
7S1/2			0.300217162	0.000015879	-0.000005834		
3P1/2 -- (2)	523.123788	-1061.814619	6.640366045	0.036966625		-0.026014849	0.001755632
3P3/2			5.892999264	0.003710971	-0.000058842		
3D3/2			6.033856278	0.012976411	-0.001116803		
3D5/2			6.353209651	0.005282135	-0.000050672		
4S1/2			3.548844014	0.002629172	-0.000314434		
4P1/2			3.495495195	0.004514673	-0.001030448		
4P3/2			3.293035764	0.001237913	-0.000073999		
4D3/2			3.330645480	0.003606870	-0.000525698		
4D5/2			3.258054738	0.001111115	-0.000037008		
4F5/2			3.298471581	0.002726247	-0.000602527		
4F7/2			3.289327496	0.000297889	-0.000063830		
5S1/2			1.846774527	0.000658320	-0.000085089		
5P1/2			1.776188000	0.001065514	-0.000258041		
5P3/2			1.618265898	0.000301616	-0.000020213		
5D3/2			1.471903201	0.000773973	-0.000123084		
5D5/2			1.428279008	0.000207889	-0.000008390		
5F5/2			0.948658087	0.000215578	-0.000049076		
6S1/2			0.855342661	0.000131337	-0.000017248		
6P1/2			0.765983248	0.000180145	-0.000044080		
6P3/2			0.665981467	0.000046512	-0.000003182		
6D3/2			0.400867453	0.000045524	-0.000007321		
7S1/2			0.300731215	0.000012948	-0.000001705		
3P3/2 -- (4)	366.551609	-851.318145	5.629252026	0.016781445		-0.001125202	0.000191149

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
3D3/2			6.005167343	0.003747383	-0.000020148		
3D5/2			5.713043243	0.009172662	-0.000175662		
4S1/2			3.463484308	0.003964884	-0.000523534		
4P1/2			3.523195175	0.001733282	-0.000132826		
4P3/2			3.161658560	0.002904220	-0.000422743		
4D3/2			3.270798054	0.001511755	-0.000143324		
4D5/2			3.174618081	0.003192459	-0.000494872		
4F5/2			3.283524485	0.001381682	-0.000138879		
4F7/2			3.211696329	0.001333878	-0.000393759		
5S1/2			1.826153745	0.000925321	-0.000127904		
5P1/2			1.778585899	0.000403187	-0.000034697		
5P3/2			1.592188555	0.000672501	-0.000105069		
5D3/2			1.460238545	0.000308070	-0.000030846		
5D5/2			1.412792095	0.000627352	-0.000107103		
5F5/2			0.947348650	0.000103841	-0.000010821		
6S1/2			0.851250049	0.000182130	-0.000025426		
6P1/2			0.766262177	0.000068015	-0.000005983		
6P3/2			0.662051108	0.000102714	-0.000016244		
6D3/2			0.400190706	0.000017988	-0.000001814		
7S1/2			0.300328059	0.000017917	-0.000002505		
3D3/2 -- (4)	360.146617	-842.626570	6.571521407	0.028772401		-0.000023055	0.000005113
3D5/2			6.512734823	0.005185799	-0.000000531		
4S1/2			3.575436468	0.001429784	-0.000037463		
4P1/2			3.594035366	0.002944896	-0.000224258		
4P3/2			3.293572398	0.000977911	-0.000025199		
4D3/2			3.299147370	0.003411157	-0.000336574		
4D5/2			3.280957574	0.001113773	-0.000016422		
4F5/2			3.270076897	0.006178798	-0.001531598		
4F7/2			3.297149621	0.000210636	-0.000024808		
5S1/2			1.852506454	0.000353955	-0.000012173		
5P1/2			1.795720140	0.000645829	-0.000052531		
5P3/2			1.620412962	0.000228683	-0.000007151		
5D3/2			1.467358052	0.000628914	-0.000068470		
5D5/2			1.432492823	0.000210662	-0.000003773		
5F5/2			0.946711107	0.000485940	-0.000122631		
6S1/2			0.856446983	0.000070490	-0.000002562		
6P1/2			0.769170102	0.000107717	-0.000008894		
6P3/2			0.666300909	0.000034997	-0.000001135		
6D3/2			0.400615755	0.000036224	-0.000003996		
7S1/2			0.300839468	0.000006947	-0.000003025		
3D5/2 -- (6)	331.379680	-800.576063	6.337189744	0.023578687		-0.000003862	0.000001304
4S1/2			3.549453627	0.001662099	-0.000037573		
4P1/2			3.597870879	0.001194471	-0.000018722		
4P3/2			3.257970242	0.001896639	-0.000082817		
4D3/2			3.347847991	0.000908692	-0.000018244		
4D5/2			3.211561860	0.002981127	-0.000211453		
4F5/2			3.332813737	0.001297863	-0.000095365		
4F7/2			3.229364449	0.003848516	-0.001070541		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
5S1/2			1.846136053	0.000400388	-0.000012173		
5P1/2			1.795339592	0.000273775	-0.000005991		
5P3/2			1.612658550	0.000423162	-0.000020884		
5D3/2			1.474631043	0.000171528	-0.000004195		
5D5/2			1.420720704	0.000542080	-0.000042652		
5F5/2			0.951446738	0.000103493	-0.000007638		
6S1/2			0.855179433	0.000079304	-0.000002560		
6P1/2			0.769067618	0.000046055	-0.000001072		
6P3/2			0.665129373	0.000064183	-0.000003246		
6D3/2			0.401021328	0.000009916	-0.000000249		
7S1/2			0.300714557	0.000007809	-0.000000255		
4S1/2 -- (2)	182.098723	-458.680261	2.848120698	0.001774536		-0.037327060	0.001763866
4P1/2			2.540309417	0.000757784	-0.000033463		
4P3/2			2.399455543	0.001098512	-0.0000219046		
4D3/2			2.578094896	0.000759382	-0.000070491		
4D5/2			2.533608427	0.000660266	-0.000080429		
4F5/2			2.650757896	0.000539762	-0.000044886		
4F7/2			2.628955163	0.000555515	-0.000046266		
5S1/2			1.632373603	0.000327707	-0.000143417		
5P1/2			1.617403924	0.000339808	-0.000066444		
5P3/2			1.466598582	0.000174169	-0.000036054		
5D3/2			1.351963877	0.000085986	-0.000010172		
5D5/2			1.312902363	0.000116839	-0.000010317		
5F5/2			0.905054859	0.000025036	-0.000001581		
6S1/2			0.814850181	0.000065652	-0.000029615		
6P1/2			0.739822129	0.000060961	-0.000012284		
6P3/2			0.643417409	0.000027668	-0.000005740		
6D3/2			0.394021925	0.000005042	-0.000000615		
7S1/2			0.296769657	0.000006473	-0.0000002931		
4P1/2 -- (2)	176.136491	-449.014975	2.870462959	0.003315254		-0.007092809	0.000476312
4P3/2			2.568544786	0.000314285	-0.000009626		
4D3/2			2.429576994	0.001878016	-0.000332026		
4D5/2			2.596466203	0.000396050	-0.000013790		
4F5/2			2.638708276	0.000879457	-0.000111679		
4F7/2			2.659182810	0.000403538	-0.000013426		
5S1/2			1.664999658	0.000360535	-0.000053559		
5P1/2			1.586327591	0.000413451	-0.000121192		
5P3/2			1.478783791	0.000103100	-0.000009300		
5D3/2			1.345070014	0.000163717	-0.000026873		
5D5/2			1.317804143	0.000084942	-0.000003551		
5F5/2			0.904427762	0.000040033	-0.000003189		
6S1/2			0.820176439	0.000069127	-0.000010900		
6P1/2			0.735559655	0.000069157	-0.000021228		
6P3/2			0.645031347	0.000016226	-0.000001591		
6D3/2			0.393682080	0.000009612	-0.000001590		
7S1/2			0.297279491	0.000006774	-0.000001077		
4P3/2 -- (4)	127.642391	-376.273376	2.476523675	0.001534396		-0.000307427	0.000051958
4D3/2			2.484572816	0.000420261	-0.000012231		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
4D5/2			2.346369761	0.000967227	-0.000080460		
4F5/2			2.525856686	0.000358000	-0.000014657		
4F7/2			2.475421643	0.000617179	-0.000043307		
5S1/2			1.629482627	0.000587828	-0.000091218		
5P1/2			1.594580558	0.000186103	-0.000017411		
5P3/2			1.436772298	0.000264515	-0.000049004		
5D3/2			1.335240859	0.000076152	-0.000006952		
5D5/2			1.293605988	0.000183431	-0.000017759		
5F5/2			0.897277456	0.000020477	-0.000000968		
6S1/2			0.813692495	0.000105454	-0.000017110		
6P1/2			0.736013959	0.000030527	-0.000003151		
6P3/2			0.639171882	0.000039887	-0.000007810		
6D3/2			0.393055662	0.000004598	-0.000000449		
7S1/2			0.296667144	0.000010247	-0.000001673		
4D3/2 -- (4)	118.532938	-359.842418	2.510510590	0.002115348		-0.000007152	0.000001579
4D5/2			2.496870101	0.000381904	-0.000000085		
4F5/2			2.427693231	0.001090066	-0.000112094		
4F7/2			2.540470890	0.000337179	-0.000002266		
5S1/2			1.641524735	0.000183520	-0.000007347		
5P1/2			1.585991168	0.000434195	-0.000049790		
5P3/2			1.459187582	0.000103844	-0.000004564		
5D3/2			1.318252955	0.000249900	-0.000031040		
5D5/2			1.302012714	0.000076674	-0.000001619		
5F5/2			0.896328550	0.000063874	-0.000006141		
6S1/2			0.815773071	0.000034407	-0.000001763		
6P1/2			0.735168405	0.000065267	-0.000007846		
6P3/2			0.642106034	0.000015481	-0.000000765		
6D3/2			0.392210739	0.000014168	-0.000001868		
7S1/2			0.296847733	0.000003364	-0.000000178		
4D5/2 -- (6)	109.719880	-345.008014	2.442518645	0.001735375		-0.000001198	0.000000403
4F5/2			2.511685257	0.000300835	-0.000005727		
4F7/2			2.408603650	0.000916844	-0.000068391		
5S1/2			1.630498052	0.000213722	-0.000007190		
5P1/2			1.591509413	0.000128656	-0.000003048		
5P3/2			1.445629285	0.000230632	-0.000017962		
5D3/2			1.333306609	0.000066027	-0.000001880		
5D5/2			1.282520423	0.000215718	-0.000019379		
5F5/2			0.896136616	0.000017701	-0.000000710		
6S1/2			0.813798850	0.000038760	-0.000001751		
6P1/2			0.735536787	0.000020473	-0.000000651		
6P3/2			0.640256629	0.000032909	-0.000002693		
6D3/2			0.392942956	0.000003784	-0.000000122		
7S1/2			0.296655419	0.000003776	-0.000000177		
4F5/2 -- (6)	96.176714	-320.686519	2.553138678	0.002173467		-0.000000003	0.000000001
4F7/2			2.577260429	0.000349193	-0.000000002		
5S1/2			1.644866415	0.000111147	-0.000000091		
5P1/2			1.592935641	0.000154974	-0.000000823		
5P3/2			1.460424056	0.000072353	-0.000000297		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
5D3/2			1.331091289	0.000148100	-0.000005722		
5D5/2			1.302136656	0.000049991	-0.000000454		
5F5/2			0.892205195	0.000097383	-0.000004598		
6S1/2			0.816461159	0.000021279	-0.000000152		
6P1/2			0.736269691	0.000024315	-0.000000341		
6P3/2			0.642322093	0.000010795	-0.000000087		
6D3/2			0.392889103	0.000008073	-0.000000328		
7S1/2			0.296914187	0.000002086	-0.000000017		
4F7/2 -- (8)	93.193355	-315.134157	2.526091652	0.001987894		-0.000000001	0.000000000
5S1/2			1.639673817	0.000135996	-0.000000070		
5P1/2			1.597468362	0.000097137	-0.000000111		
5P3/2			1.453335903	0.000119874	-0.000000693		
5D3/2			1.336817829	0.000055527	-0.000000236		
5D5/2			1.293652375	0.000128292	-0.000003701		
5F5/2			0.899509855	0.000020709	-0.000000142		
6S1/2			0.815518164	0.000024681	-0.000000148		
6P1/2			0.736557703	0.000015186	-0.000000075		
6P3/2			0.641396816	0.000017122	-0.000000184		
6D3/2			0.393145603	0.000003110	-0.000000019		
7S1/2			0.296822111	0.000002406	-0.000000017		
5S1/2 -- (2)	57.068551	-204.620319	1.371990360	0.000177815		-0.009687083	0.000457457
5P1/2			1.190978068	0.000117107	-0.000011150		
5P3/2			1.129426192	0.000157843	-0.000040568		
5D3/2			1.127922662	0.000109420	-0.000014234		
5D5/2			1.105779145	0.000059964	-0.000014718		
5F5/2			0.827074749	0.000034236	-0.000004368		
6S1/2			0.748695778	0.000027699	-0.000013815		
6P1/2			0.691268171	0.000017124	-0.000003921		
6P3/2			0.606729947	0.000011062	-0.000003655		
6D3/2			0.382802899	0.000003796	-0.000000598		
7S1/2			0.290555467	0.000002736	-0.000001396		
5P1/2 -- (2)	52.316501	-194.389484	1.321893661	0.000301863		-0.001739610	0.000116676
5P3/2			1.181328583	0.000028190	-0.000001238		
5D3/2			1.047936033	0.0000279175	-0.0000062833		
5D5/2			1.110913098	0.000024207	-0.000002408		
5F5/2			0.810843381	0.000056280	-0.000011431		
6S1/2			0.755254603	0.000042143	-0.000006755		
6P1/2			0.678682047	0.000027348	-0.000009339		
6P3/2			0.608219583	0.000006034	-0.000000664		
6D3/2			0.380493832	0.000007599	-0.000001951		
7S1/2			0.291070516	0.000003964	-0.000000659		
5P3/2 -- (4)	38.238226	-167.207302	1.140470688	0.000139888		-0.000074393	0.000012557
5D3/2			1.073338064	0.000054256	-0.000003689		
5D5/2			1.009937824	0.000103970	-0.000020429		
5F5/2			0.802429749	0.000025346	-0.000002298		
6S1/2			0.739639537	0.0000067431	-0.000010864		
6P1/2			0.680505960	0.000014100	-0.000001426		
6P3/2			0.595921354	0.000015844	-0.000003335		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NEPTUNIUM 5F4 6D1 Z=93 A=237 R=1.40336E-04 A.U.							
6D3/2			0.380332473	0.000001665	-0.000000146		
7S1/2			0.289689041	0.000006936	-0.000001010		
5D3/2 -- (4)	30.259395	-146.509187	1.023268484	0.000144728		-0.000001485	0.000000328
5D5/2			1.017344380	0.000026146	-0.000000008		
5F5/2			0.744032688	0.000084942	-0.000018788		
6S1/2			0.725332473	0.000017290	-0.000000576		
6P1/2			0.660093710	0.000041188	-0.000004914		
6P3/2			0.592931081	0.000007638	-0.000000427		
6D3/2			0.375405812	0.000005201	-0.000000661		
7S1/2			0.288474495	0.000001587	-0.000000075		
5D5/2 -- (6)	27.886824	-140.852201	0.994577088	0.000117617		-0.000000246	0.000000083
5F5/2			0.773328075	0.000019004	-0.000001093		
6S1/2			0.719215939	0.000021580	-0.000000494		
6P1/2			0.664821142	0.000010272	-0.000000219		
6P3/2			0.587360418	0.000018669	-0.000001848		
6D3/2			0.377342998	0.000001396	-0.000000041		
7S1/2			0.287978216	0.000001850	-0.000000069		
5F5/2 -- (4)	12.196923	-89.415137	0.634451255	0.000041860		-0.000000000	0.000000000
6S1/2			0.616630051	0.000007070	-0.000000332		
6P1/2			0.568986456	0.000008859	-0.000000411		
6P3/2			0.528251405	0.000003291	-0.000000038		
6D3/2			0.351182155	0.000002927	-0.000000004		
7S1/2			0.278593771	0.000000622	-0.000000000		
6S1/2 -- (2)	13.475206	-86.138582	0.623288076	0.000014136		-0.001949216	0.000092034
6P1/2			0.520178596	0.000015468	-0.000002097		
6P3/2			0.484453157	0.000015758	-0.000004381		
6D3/2			0.354655019	0.000004573	-0.000000623		
7S1/2			0.274728683	0.000001039	-0.0000000512		
6P1/2 -- (2)	10.619469	-76.176171	0.557776004	0.000019435		-0.000296601	0.000019888
6P3/2			0.488939633	0.000001736	-0.000000077		
6D3/2			0.334483963	0.000012750	-0.000002982		
7S1/2			0.274121099	0.000002182	-0.000000337		
6P3/2 -- (4)	7.156309	-64.497466	0.465578447	0.000008172		-0.000011467	0.000001935
6D3/2			0.336214619	0.000002714	-0.000000267		
7S1/2			0.267713258	0.000003064	-0.000000444		
6D3/2 -- (1)	2.383508	-37.838416	0.000000000	0.000000000		-0.000000087	0.000000019
7S1/2			0.232336461	0.000000369	-0.000000005		
7S1/2 -- (2)	1.531872	-28.618381	0.220051487	0.000000529		-0.000192426	0.000009085
ETOT	-28816.22124	35463.99169	-74579.15348	10268.39961	43.737460110	-4.610008666	-9.052597200
							0.466075042

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-34 A.U.					
1S1/2 -- (2)	6841.976809	-11947.208097	72.698632172	12.898778034		-3.842904610	0.200927231
2S1/2			22.962309163	0.728219083	-0.089870544		
2P1/2			28.749716951	1.500497738	-0.183373567		
2P3/2			22.252429387	0.617978893	-0.178481412		
3S1/2			9.603419850	0.161809771	-0.021318857		
3P1/2			10.798079303	0.303512976	-0.036253825		
3P3/2			9.006847446	0.142498693	-0.042415423		
3D3/2			9.180278645	0.006233120	-0.000686843		
3D5/2			8.714291500	0.002440581	-0.000780703		
4S1/2			4.457232860	0.043724975	-0.005844232		
4P1/2			4.702340474	0.078170595	-0.009288686		
4P3/2			4.039220045	0.037243145	-0.011162907		
4D3/2			3.934383940	0.001851451	-0.000204751		
4D5/2			3.769802061	0.000725988	-0.000234461		
4F5/2			3.514364155	0.000005920	-0.000000597		
4F7/2			3.452409311	0.000002291	-0.000000753		
5S1/2			2.102971214	0.011424235	-0.001532674		
5P1/2			2.087551402	0.019116000	-0.002268488		
5P3/2			1.818016209	0.009001939	-0.002702842		
5D3/2			1.612067364	0.000386080	-0.000042730		
5D5/2			1.548098084	0.000149761	-0.000048468		
5F5/2			0.963105512	0.000000578	-0.000000058		
6S1/2			0.909353022	0.002246827	-0.000301708		
6P1/2			0.817521392	0.003133006	-0.000371683		
6P3/2			0.689028732	0.001303869	-0.000391632		
7S1/2			0.295385991	0.000196040	-0.000026328		
2S1/2 -- (2)	1717.104126	-3036.953920	16.644497822	0.296234130		-0.621497786	0.030294009
2P1/2			16.711306932	0.090705720	-0.000099809		
2P3/2			14.949516960	0.120880831	-0.003203634		
3S1/2			7.872808865	0.035842212	-0.008582835		
3P1/2			8.699531689	0.061926798	-0.009467328		
3P3/2			7.746900160	0.034850048	-0.003807887		
3D3/2			8.622950627	0.033493739	-0.004561141		
3D5/2			8.269442747	0.014140434	-0.004481379		
4S1/2			4.007565639	0.009600821	-0.002424638		
4P1/2			4.166259968	0.016529758	-0.002598085		
4P3/2			3.719524094	0.009445065	-0.001172482		
4D3/2			3.793898980	0.007234611	-0.001041124		
4D5/2			3.658256962	0.003224562	-0.001047565		
4F5/2			3.509731936	0.003476768	-0.000062135		
4F7/2			3.448389900	0.000169899	-0.000060473		
5S1/2			1.986486373	0.002501953	-0.000638822		
5P1/2			1.956639592	0.004068593	-0.000643098		
5P3/2			1.741241575	0.002298160	-0.000293031		
5D3/2			1.583726055	0.001410869	-0.000205499		
5D5/2			1.525871705	0.000630575	-0.000205477		
5F5/2			0.962668025	0.000044572	-0.000005851		
6S1/2			0.886489293	0.000491747	-0.000125874		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.						
2P1/2 -- (2)	1718.238108	-3038.818340	6P1/2	0.796071615	0.000667714	-0.000105668	-0.108672104	0.007610449
			6P3/2	0.677923248	0.000333307	-0.000042733		
			7S1/2	0.293391693	0.0000042902	-0.000010986		
			2P3/2	20.844663551	0.681935303			
			3S1/2	17.599588202	0.073429197	-0.000358264		
			3P1/2	8.423754694	0.024458236	-0.001651627		
			3P3/2	8.732692273	0.057641532	-0.008400018		
			3D3/2	8.104193114	0.018502862	-0.000489737		
			3D5/2	8.646620480	0.097600046	-0.023222949		
			4S1/2	8.491450574	0.002756583	-0.000673443		
			4P1/2	4.142205413	0.006536823	-0.000494188		
			4P3/2	4.181018473	0.014393011	-0.002305711		
			4D3/2	3.808132545	0.004844129	-0.000151223		
			4D5/2	3.802928172	0.022516573	-0.005517150		
			4F5/2	3.711435022	0.000746048	-0.000172030		
			4F7/2	3.510852036	0.000544043	-0.000113972		
			5S1/2	3.450641055	0.000029608	-0.000011345		
			5P1/2	2.020860618	0.001702485	-0.000132098		
			5P3/2	1.960964117	0.003493997	-0.000571161		
			5D3/2	1.762413748	0.001170716	-0.000037891		
5D5/2	1.585673992	0.004455467	-0.001098441					
5F5/2	1.536365696	0.000151306	-0.000034412					
6S1/2	0.962774303	0.000051102	-0.000010768					
6P1/2	0.893213012	0.000334568	-0.000026119					
6P3/2	0.796805482	0.000571725	-0.000093867					
7S1/2	0.680982623	0.000169562	-0.000005529					
2P3/2 -- (4)	1061.733654	-2195.774765	6P1/2	0.293977860	0.000029188	-0.000002281	-0.004229488	0.000750150
			3S1/2	16.151820733	0.276271000	-0.002501098		
			3P1/2	8.102231305	0.029853026	-0.000860391		
			3P3/2	8.730599690	0.018030412	-0.003262976		
			3D3/2	7.635070701	0.034708624	-0.002811949		
			3D5/2	8.676663489	0.029375999	-0.013678514		
			4S1/2	8.164911766	0.048095098	-0.000664598		
			4P1/2	4.057970722	0.007454935	-0.000246740		
			4P3/2	4.172974975	0.004488753	-0.000892422		
			4D3/2	3.696175723	0.006437828	-0.000620753		
			4D5/2	3.807370724	0.010418877	-0.000039793		
			4F5/2	3.638308710	0.000411505	-0.000114289		
			4F7/2	3.509573376	0.000352576	-0.000173257		
			5S1/2	3.446957497	0.001912046	-0.000061879		
			5P1/2	1.998995371	0.001089882	-0.000217460		
			5P3/2	1.958202318	0.002036129	-0.000121963		
			5D3/2	1.735891958	0.001262241	-0.000597306		
			5D5/2	1.586423212	0.002016267	-0.000003723		
			5F5/2	1.522114190	0.000038259	-0.000034060		
			6S1/2	0.962655177	0.000374394	-0.000010198		
6P1/2	0.888919218	0.000178352						
6P3/2	0.796324849							

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.					
6P3/2			0.677157054	0.000294034	-0.000031548		
7S1/2			0.293603305	0.000032645	-0.000002972		
3S1/2 -- (2)	548.459738	-1102.900562	6.306349632	0.019374256		-0.146870405	0.007086499
3P1/2			5.838909830	0.006580211	-0.000070501		
3P3/2			5.434103566	0.009298901	-0.001083217		
3D3/2			6.248707648	0.005844315	-0.000215962		
3D5/2			6.126676311	0.007441818	-0.000274701		
4S1/2			3.485681426	0.003298909	-0.001159176		
4P1/2			3.617646804	0.004720802	-0.000813509		
4P3/2			3.275031673	0.002487997	-0.000318148		
4D3/2			3.362523250	0.001707849	-0.000164643		
4D5/2			3.270542507	0.001695332	-0.000136598		
4F5/2			3.369582769	0.001691824	-0.000237785		
4F7/2			3.319539101	0.000768395	-0.000232402		
5S1/2			1.858912736	0.000854895	-0.000311500		
5P1/2			1.826456195	0.001205375	-0.000214513		
5P3/2			1.637473130	0.000634555	-0.000086063		
5D3/2			1.500224004	0.000365350	-0.000038573		
5D5/2			1.451660142	0.000330485	-0.000031995		
5F5/2			0.950803613	0.000128857	-0.000018826		
6S1/2			0.861645079	0.000167698	-0.000061493		
6P1/2			0.774861556	0.000198941	-0.000035602		
6P3/2			0.662992063	0.000092791	-0.000012719		
7S1/2			0.291228180	0.000014626	-0.000005368		
3P1/2 -- (2)	543.216191	-1095.931768	6.754751694	0.038852335		-0.028827443	0.001977091
3P3/2			5.982310270	0.003829847	-0.000064677		
3D3/2			6.127201226	0.013631329	-0.001196852		
3D5/2			6.448833511	0.005497757	-0.000054376		
4S1/2			3.611428971	0.002766042	-0.000330098		
4P1/2			3.558840509	0.004767511	-0.001086345		
4P3/2			3.335530650	0.001284616	-0.000077581		
4D3/2			3.387910641	0.003749157	-0.000544120		
4D5/2			3.312564636	0.001168117	-0.000038695		
4F5/2			3.361435015	0.002876260	-0.000635863		
4F7/2			3.351328752	0.000313414	-0.000067336		
5S1/2			1.886465412	0.000700131	-0.000090351		
5P1/2			1.816594336	0.001139193	-0.000275506		
5P3/2			1.650761721	0.000316810	-0.000021436		
5D3/2			1.505564573	0.000818056	-0.000129753		
5D5/2			1.459593886	0.000221615	-0.000008906		
5F5/2			0.950302650	0.000222316	-0.000050704		
6S1/2			0.866958542	0.000136653	-0.000017920		
6P1/2			0.773375831	0.000185770	-0.000045397		
6P3/2			0.664882883	0.000046037	-0.000003179		
7S1/2			0.291689427	0.000011909	-0.000001566		
3P3/2 -- (4)	376.662964	-872.585311	5.704981816	0.017452373		-0.001206544	0.000209552
3D3/2			6.087536665	0.003895286	-0.000020539		
3D5/2			5.789089659	0.009529010	-0.000182343		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.					
4S1/2			3.521600983	0.004194296	-0.000556105		
4P1/2			3.584522912	0.001831241	-0.000140548		
4P3/2			3.209834627	0.003037762	-0.000442670		
4D3/2			3.324704289	0.001590696	-0.000150912		
4D5/2			3.225433001	0.003346691	-0.000519562		
4F5/2			3.344537266	0.001456940	-0.000146403		
4F7/2			3.270418204	0.001406932	-0.000415167		
5S1/2			1.864546416	0.000987039	-0.000137005		
5P1/2			1.818440863	0.000430576	-0.000037140		
5P3/2			1.623437667	0.000711200	-0.000111282		
5D3/2			1.493064312	0.000329013	-0.000032973		
5D5/2			1.443200886	0.000666732	-0.000114105		
5F5/2			0.948863636	0.000106813	-0.000011139		
6S1/2			0.862703031	0.000189973	-0.000026633		
6P1/2			0.773550073	0.000070039	-0.000006177		
6P3/2			0.661002069	0.000102341	-0.000016209		
7S1/2			0.291318829	0.000016522	-0.000002320		
3D3/2 -- (4)	370.185783	-863.824402	6.664012830	0.029945808		-0.000325425	0.000005769
3D5/2			6.631194279	0.005386715	-0.000000579		
4S1/2			3.636455260	0.001501049	-0.000039426		
4P1/2			3.657501434	0.003104812	-0.000237973		
4P3/2			3.344608834	0.001022566	-0.000026376		
4D3/2			3.354118443	0.003575575	-0.000353607		
4D5/2			3.334360055	0.001166542	-0.000017232		
4F5/2			3.331143968	0.006522380	-0.001616984		
4F7/2			3.358523699	0.000222546	-0.000026191		
5S1/2			1.891844528	0.000375366	-0.000012965		
5P1/2			1.836303502	0.000688205	-0.000356333		
5P3/2			1.652582448	0.000241815	-0.000007582		
5D3/2			1.500548898	0.000668647	-0.000073028		
5D5/2			1.463651459	0.000223645	-0.000004021		
5F5/2			0.948267462	0.000501266	-0.000126576		
6S1/2			0.867968603	0.000073124	-0.000002671		
6P1/2			0.776473840	0.000110676	-0.000009197		
6P3/2			0.665136576	0.000034867	-0.0000001134		
7S1/2			0.291776933	0.000006371	-0.0000000235		
3D5/2 -- (6)	339.976641	-819.724547	6.420299181	0.024490505		-0.000004223	0.000001460
4S1/2			3.609243521	0.001743214	-0.000039528		
4P1/2			3.660705763	0.001253900	-0.000019695		
4P3/2			3.307800084	0.001981096	-0.000086712		
4D3/2			3.403215301	0.000951595	-0.000019174		
4D5/2			3.263020907	0.003118800	-0.000221838		
4F5/2			3.395296890	0.001370496	-0.000100605		
4F7/2			3.288589012	0.004061339	-0.001129794		
5S1/2			1.885104104	0.000424003	-0.000012962		
5P1/2			1.835724695	0.000290743	-0.000006398		
5P3/2			1.644471886	0.000446732	-0.000022121		
5D3/2			1.507940754	0.000182251	-0.000004482		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.					
			1.451391380	0.000574473	-0.000045371		
			0.952992918	0.000106805	-0.000007876		
			0.866656591	0.000082142	-0.000002668		
			0.776340949	0.000047168	-0.000001105		
			0.663981928	0.000063836	-0.000003239		
			0.291662632	0.000007151	-0.000000234		
4S1/2 -- (2)	189.536922	-473.441480	2.897944852	0.001873571		-0.040301835	0.001939703
			2.585990529	0.000795880	-0.000034446		
			2.439406145	0.001166786	-0.000236132		
			2.622626437	0.000800962	-0.000074617		
			2.576543201	0.000693167	-0.000085345		
			2.700592793	0.000568932	-0.000047175		
			2.678063546	0.000586557	-0.000048681		
			1.665897445	0.000349942	-0.000153206		
			1.652798824	0.000366787	-0.000071642		
			1.495019336	0.000183378	-0.000038680		
			1.381731981	0.000091859	-0.000010926		
			1.340716477	0.000124246	-0.000011084		
			0.906838069	0.000025894	-0.000001635		
			0.826208590	0.000068577	-0.000030940		
			0.747344904	0.000063438	-0.000012767		
			0.643049021	0.000027403	-0.000005784		
			0.288163650	0.000005977	-0.000002706		
4P1/2 -- (2)	183.504477	-463.716223	2.922973132	0.003506042		-0.007898543	0.000538982
			2.611855508	0.000326983	-0.000010678		
			2.472556379	0.001991282	-0.000354159		
			2.641292834	0.000414306	-0.000014745		
			2.658686486	0.000928283	-0.000117692		
			2.709806081	0.000426548	-0.000014174		
			1.699651488	0.000383492	-0.000056994		
			1.620988291	0.000443148	-0.000130020		
			1.507748852	0.000108280	-0.000009940		
			1.374747979	0.000174702	-0.000028963		
			1.345898546	0.000090258	-0.000003822		
			0.906285087	0.000041438	-0.000003303		
			0.831601166	0.000071941	-0.000011351		
			0.743145036	0.000071491	-0.000021959		
			0.644641202	0.000016063	-0.000001600		
			0.288620708	0.000006234	-0.000000992		
4P3/2 -- (4)	131.857552	-386.595921	2.515053369	0.001608750		-0.000331663	0.000057300
			2.525114515	0.000439282	-0.000012561		
			2.384082385	0.001013357	-0.000083599		
			2.570473767	0.000375235	-0.000015110		
			2.519039788	0.000649008	-0.000044725		
			1.662196957	0.000631619	-0.000098192		
			1.628569530	0.000200509	-0.000018778		
			1.464076358	0.000280793	-0.000052197		
			1.364100292	0.000081979	-0.000007530		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94 A=244 R=1.41704E-04 A.U.					
			1.320542632	0.000196387	-0.000019164		
			0.898923174	0.000021400	-0.000001030		
			0.824916323	0.000110619	-0.000017986		
			0.743453200	0.000031666	-0.000003274		
			0.638895224	0.000039894	-0.000007834		
			0.288044090	0.000009507	-0.000001555		
4D3/2 -- (4)	122.660891	-370.097800	2.553435800	0.002225038		-0.000007957	0.000001797
			2.538805988	0.000400718	-0.000000093		
			2.472925920	0.001143293	-0.000115889		
			2.587195598	0.000356077	-0.000002354		
			1.675152483	0.000195595	-0.000007877		
			1.620238015	0.000465844	-0.000053646		
			1.487420111	0.000110082	-0.000004853		
			1.346948320	0.000266950	-0.000033388		
			1.329445609	0.000081686	-0.000001739		
			0.898127569	0.000067227	-0.000006651		
			0.827103479	0.000035851	-0.000001848		
			0.742694146	0.000067450	-0.000008145		
			0.641780384	0.000015467	-0.000000766		
			0.288230738	0.000003100	-0.000000165		
4D5/2 -- (6)	113.381087	-354.536066	2.482862880	0.001822594		-0.000001322	0.000000456
			2.557290486	0.000315699	-0.000005869		
			2.452387411	0.000962655	-0.000070312		
			1.663608621	0.000227616	-0.000007703		
			1.625706986	0.000137429	-0.000003274		
			1.473402507	0.000244424	-0.000019093		
			1.362285441	0.000070482	-0.000002026		
			1.309310494	0.000229742	-0.000020799		
			0.897852733	0.000018505	-0.000000763		
			0.825081895	0.000040342	-0.000001835		
			0.743023940	0.000021073	-0.000000675		
			0.639975852	0.000032872	-0.000002698		
			0.288656541	0.000003476	-0.000000164		
4F5/2 -- (6)	99.814621	-330.350978	2.604472326	0.002301452		-0.000000004	0.000000002
			2.628822546	0.000369975	-0.000000002		
			1.679652273	0.000118461	-0.000000610		
			1.628452646	0.000165627	-0.000000926		
			1.489441478	0.000076898	-0.000000330		
			1.360828463	0.000158095	-0.000006162		
			1.330134940	0.000053345	-0.000000490		
			0.894279915	0.000100580	-0.000004843		
			0.827973598	0.000022183	-0.000000163		
			0.743930396	0.000025059	-0.000000359		
			0.642088233	0.000010812	-0.000000089		
			0.288305171	0.000001923	-0.000000016		
4F7/2 -- (8)	96.667866	-324.527077	2.576272090	0.002103837		-0.000000001	0.000000000
			1.674252815	0.000144716	-0.000000085		
			1.632938644	0.000103670	-0.000000126		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM	5F6	Z=94	A=244	R=1.41704E-04	A.U.		
5P3/2			1.482180701	0.000127143	-0.000000769		
5D3/2			1.366578859	0.000059295	-0.000000259		
5D5/2			1.321429055	0.000136579	-0.000003970		
5F5/2			0.901477147	0.000021423	-0.000000150		
6S1/2			0.827012892	0.000025701	-0.000000158		
6P1/2			0.744197068	0.000015636	-0.000000079		
6P3/2			0.641190417	0.000017127	-0.000000188		
7S1/2			0.288222211	0.000002216	-0.000000016		
5S1/2 -- (2)	59.983841	-211.935116	1.400924351	0.000190330		-0.010573314	0.000508547
5P1/2			1.217015596	0.000123810	-0.000011630		
5P3/2			1.152588183	0.000170715	-0.000044017		
5D3/2			1.152556509	0.000116949	-0.000015197		
5D5/2			1.129299977	0.000064106	-0.000015729		
5F5/2			0.829307503	0.000035490	-0.000004524		
6S1/2			0.760164848	0.000029059	-0.000014487		
6P1/2			0.699442077	0.000017901	-0.000004084		
6P3/2			0.607831632	0.000011234	-0.000003735		
7S1/2			0.282666265	0.000002538	-0.000001293		
5P1/2 -- (2)	55.121232	-201.590136	1.351568941	0.000324312		-0.001962046	0.000133713
5P3/2			1.206035941	0.000029827	-0.0000031400		
5D3/2			1.071514920	0.000300058	-0.0000067541		
5D5/2			1.135048431	0.000025823	-0.000002593		
5F5/2			0.813382914	0.000058342	-0.000011833		
6S1/2			0.766903549	0.000043943	-0.0000037044		
6P1/2			0.687058077	0.000028422	-0.000009693		
6P3/2			0.609374832	0.000005976	-0.000000668		
7S1/2			0.283141945	0.000003666	-0.000000609		
5P3/2 -- (4)	39.925832	-172.571514	1.162672711	0.000148786		-0.000081189	0.000014008
5D3/2			1.095844525	0.000057288	-0.000003851		
5D5/2			1.030584373	0.000110239	-0.000021486		
5F5/2			0.804423007	0.000026074	-0.000002351		
6S1/2			0.750794139	0.000071306	-0.000011478		
6P1/2			0.688567963	0.000014787	-0.000001491		
6P3/2			0.597322941	0.000015919	-0.000003340		
7S1/2			0.281877608	0.000005666	-0.000000945		
5D3/2 -- (4)	31.741370	-151.589972	1.045958134	0.000155080		-0.000001679	0.000000379
5D5/2			1.039371145	0.000027888	-0.000000009		
5F5/2			0.746972806	0.000087369	-0.000019235		
6S1/2			0.736872655	0.000018164	-0.000000608		
6P1/2			0.668508526	0.000042917	-0.000005119		
6P3/2			0.594666370	0.000007662	-0.000000426		
7S1/2			0.280829534	0.000001479	-0.000000069		
5D5/2 -- (6)	29.182451	-145.557336	1.015641657	0.000125642		-0.000000276	0.000000095
5F5/2			0.775782605	0.000019534	-0.000001110		
6S1/2			0.730543063	0.000022668	-0.000000518		
6P1/2			0.673142356	0.000010688	-0.000000226		
6P3/2			0.589197471	0.000018753	-0.000001851		
7S1/2			0.280373422	0.000001727	-0.000000063		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
PLUTONIUM 5F6 Z=94 A=244 R=1.41704E-04 A.U.							
5F5/2 -- (6)	12.386938	-90.531991	0.627976076	0.000042204		-0.000000000	0.000000000
6S1/2			0.617740364	0.000007230	-0.000000341		
6P1/2			0.569023301	0.000009013	-0.000000434		
6P3/2			0.524790947	0.000003259	-0.000000041		
7S1/2			0.270604464	0.000000566	-0.000000000		
6S1/2 -- (2)	13.848839	-88.284183	0.631874791	0.000014696		-0.002081573	0.000100101
6P1/2			0.526285387	0.000015919	-0.000002155		
6P3/2			0.487075355	0.000016116	-0.000004484		
7S1/2			0.258276269	0.000000943	-0.000000456		
6P1/2 -- (2)	10.796154	-77.727551	0.563265885	0.000019957		-0.000322697	0.000021985
6P3/2			0.490805607	0.000001729	-0.000000081		
7S1/2			0.267635344	0.000001971	-0.000000302		
6P3/2 -- (4)	7.053255	-65.011993	0.465154044	0.000008101		-0.000011791	0.000002034
7S1/2			0.251196595	0.000002770	-0.000000393		
7S1/2 -- (2)	1.391111	-28.011042	0.213689124	0.000000478		-0.0000181650	0.000008735
ETOT	-29624.81494	36675.43366	-76885.66567	10553.85890	45.488162521	-4.788647938	0.506470130
AMERICIUM 5F7 Z=95 A=243 R=1.41510E-04 A.U.							
1S1/2 -- (2)	7078.018437	-12312.815120	73.939742680	13.381193255		-4.085390995	0.217640435
2S1/2			23.378198710	0.758473268	-0.093784492		
2P1/2			29.333097551	1.561895496	-0.189329708		
2P3/2			22.534866424	0.637962649	-0.184235927		
3S1/2			9.775218847	0.168725944	-0.022267602		
3P1/2			11.007605979	0.315927353	-0.037383126		
3P3/2			9.133051074	0.147758338	-0.043973992		
3D3/2			9.309700793	0.006434087	-0.000704631		
3D5/2			8.826395185	0.002516476	-0.000804788		
4S1/2			4.541481002	0.045771813	-0.006127939		
4P1/2			4.798245869	0.081710261	-0.009615394		
4P3/2			4.105055340	0.038842894	-0.011640705		
4D3/2			4.002558518	0.001927349	-0.000211820		
4D5/2			3.831794410	0.000755308	-0.000243875		
4F5/2			3.580428328	0.000006221	-0.000000623		
4F7/2			3.516152037	0.000002411	-0.000000793		
5S1/2			2.151123489	0.012087446	-0.001624362		
5P1/2			2.139925601	0.020233473	-0.002377668		
5P3/2			1.856888441	0.009505784	-0.002853760		
5D3/2			1.652497923	0.000409636	-0.000045056		
5D5/2			1.585516568	0.000158757	-0.000051369		
5F5/2			1.013023763	0.000000654	-0.000000066		
5F7/2			0.971874638	0.000000241	-0.000000079		
6S1/2			0.930541496	0.002382220	-0.000320428		
6P1/2			0.837734218	0.003320213	-0.000390040		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95 A=243 R=1.41510E-04 A.U.					
2S1/2 --	1782.949820	-3137.707661				-0.667081659	0.033101545
6P3/2			0.701398747	0.001365544	-0.000410108		
7S1/2			0.299290821	0.000201902	-0.000027161		
(2)			16.930885369	0.310419252			
2P1/2			17.015665702	0.095082244	-0.000101467		
2P3/2			15.167744148	0.125657240	-0.005646245		
3S1/2			8.004218486	0.037591135	-0.008987967		
3P1/2			8.852644860	0.065062810	-0.009929848		
3P3/2			7.856641587	0.035932522	-0.003892633		
3D3/2			8.747098436	0.034805228	-0.004735310		
3D5/2			8.379822917	0.014657576	-0.004650843		
4S1/2			4.079352976	0.010108482	-0.002549387		
4P1/2			4.245084727	0.017439183	-0.002735982		
4P3/2			3.779343400	0.009802972	-0.001208261		
4D3/2			3.859465852	0.007584300	-0.001090287		
4D5/2			3.718780139	0.003373467	-0.001097629		
4F5/2			3.575698383	0.000500765	-0.000065191		
4F7/2			3.512060599	0.000178257	-0.000063455		
5S1/2			2.030119781	0.002662482	-0.000678959		
5P1/2			2.003118965	0.004346679	-0.000685787		
5P3/2			1.777699307	0.002415625	-0.000305977		
5D3/2			1.623083947	0.001506374	-0.000219203		
5D5/2			1.562580292	0.000671742	-0.000219257		
5F5/2			1.012542454	0.000050425	-0.000006613		
5F7/2			0.971480039	0.000017053	-0.000006115		
6S1/2			0.906741416	0.000524383	-0.000134066		
6P1/2			0.815290420	0.000714239	-0.000112824		
6P3/2			0.693038346	0.000347488	-0.000044263		
7S1/2			0.297274290	0.000044439	-0.000011366		
2P1/2 --	1784.764516	-3140.405039	21.239296910	0.715236743		-0.120179966	0.008552170
2P3/2			17.860660115	0.075777404	-0.000390873		
3S1/2			8.570068291	0.025661072	-0.001724756		
3P1/2			8.856758252	0.060565044	-0.008800891		
3P3/2			8.221710387	0.019183494	-0.000507367		
3D3/2			8.772431449	0.101217592	-0.024081586		
3D5/2			8.603635260	0.002838214	-0.000696708		
4S1/2			4.218251204	0.006886546	-0.000518354		
4P1/2			4.260515219	0.015191705	-0.002427162		
4P3/2			3.870379949	0.005053303	-0.000157545		
4D3/2			3.869001556	0.023561407	-0.005772372		
4D5/2			3.772908137	0.000774829	-0.000179610		
4F5/2			3.576854952	0.000569740	-0.000119324		
4F7/2			3.514359571	0.000030938	-0.000011865		
5S1/2			2.065961780	0.001812888	-0.000140083		
5P1/2			2.007692533	0.003734484	-0.000608956		
5P3/2			1.799719671	0.001236605	-0.00039979		
5D3/2			1.625175774	0.004749330	-0.001170809		
5D5/2			1.573459171	0.000160072	-0.000036594		
5F5/2			1.012660690	0.000057649	-0.000012146		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
2P3/2 -- (4)	1087.506117	-2246.661738	0.971700913	0.000002989	-0.000001150		
3S1/2			0.913766501	0.000357007	-0.000027759		
3P1/2			0.816067641	0.000611818	-0.000100208		
3P3/2			0.693194003	0.000177637	-0.000005786		
7S1/2			0.297869192	0.000030254	-0.000002355		
3S1/2			16.349105778	0.285803020		-0.004512150	0.000818397
3P1/2			8.231416031	0.031267370	-0.002640226		
3P3/2			8.873762471	0.018852317	-0.000901493		
3D3/2			7.736578865	0.036002997	-0.003388168		
3D5/2			8.796162105	0.030507245	-0.002914478		
4S1/2			8.269128459	0.049886695	-0.014188814		
4P1/2			4.129173067	0.007826264	-0.000702462		
4P3/2			4.249303364	0.004709043	-0.000259349		
4D3/2			3.753844112	0.008910203	-0.000931677		
4D5/2			3.871996501	0.006729196	-0.000647428		
4F5/2			3.697328956	0.010886868	-0.003205021		
4F7/2			3.575452874	0.000436362	-0.000042150		
5S1/2			3.510506879	0.000373511	-0.000121099		
5P1/2			2.042590748	0.002027944	-0.000184990		
5P3/2			2.004083859	0.001157556	-0.000065865		
5D3/2			1.771768528	0.002149001	-0.000229848		
5D5/2			1.625642298	0.001343235	-0.000129503		
5F5/2			1.558461269	0.002144332	-0.000635436		
5F7/2			1.012520031	0.000043676	-0.000004246		
6S1/2			0.971335279	0.000035455	-0.000011583		
6P1/2			0.909167481	0.000397859	-0.000036437		
6P3/2			0.815445808	0.000189648	-0.000010869		
6D3/2			0.689195482	0.000307761	-0.000033071		
6D5/2			0.297479499	0.000033697	-0.000003088		
3S1/2 -- (2)	569.304376	-1138.014230	6.409832341	0.020340775		-0.157996070	0.007759635
3P1/2			5.937756146	0.006901787	-0.000072068		
3P3/2			5.514893866	0.009737655	-0.001169983		
3D3/2			6.343798996	0.006114950	-0.000229719		
3D5/2			6.216665784	0.007753884	-0.000293043		
4S1/2			3.545781003	0.003475519	-0.001219625		
4P1/2			3.682878760	0.004994981	-0.000859743		
4P3/2			3.326086257	0.002568802	-0.000330826		
4D3/2			3.419288034	0.001783320	-0.000171635		
4D5/2			3.324088156	0.001775942	-0.000141930		
4F5/2			3.432490819	0.001783550	-0.000250707		
4F7/2			3.380633212	0.000809090	-0.000245009		
5S1/2			1.897894458	0.000910253	-0.000331284		
5P1/2			1.868023837	0.001291382	-0.000229570		
5P3/2			1.670589697	0.000663688	-0.000090492		
5D3/2			1.536322399	0.000389031	-0.000041050		
5D5/2			1.485683449	0.000352551	-0.000033924		
5F5/2			0.999513352	0.000145622	-0.000021299		
5F7/2			0.960120898	0.000066556	-0.000019898		

TABLE 1.-- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41513E-04	A.U.		
6S1/2			0.881021562	0.000178920	-0.000065536		
6P1/2			0.793254219	0.000213405	-0.000038152		
6P3/2			0.674754333	0.000096274	-0.000013264		
7S1/2			0.295098661	0.000015158	-0.000005557		
3P1/2 -- (2)	564.097940	-1131.117070	6.870831055	0.040827140		-0.031952159	0.002225661
3P3/2			6.072356594	0.003950467	-0.000071039		
3D3/2			6.221305172	0.014318469	-0.001283051		
3D5/2			6.545128089	0.005719295	-0.000058357		
4S1/2			3.674856676	0.002909500	-0.000346456		
4P1/2			3.623003897	0.005033173	-0.001144861		
4P3/2			3.388332522	0.001332071	-0.000081315		
4D3/2			3.445470041	0.003892795	-0.000562445		
4D5/2			3.367285205	0.001227329	-0.000040431		
4F5/2			3.424422230	0.003031389	-0.000670345		
4F7/2			3.413272777	0.000329336	-0.000070958		
5S1/2			1.926889008	0.000744406	-0.000095902		
5P1/2			1.857905137	0.001217759	-0.000294072		
5P3/2			1.684424020	0.000332862	-0.000022748		
5D3/2			1.541938195	0.000866563	-0.000137056		
5D5/2			1.493979619	0.000237095	-0.000009486		
5F5/2			0.998989414	0.000251557	-0.000057379		
5F7/2			0.962804814	0.000029302	-0.000005945		
6S1/2			0.886542845	0.000145590	-0.000019065		
6P1/2			0.791731226	0.000198812	-0.000048519		
6P3/2			0.676706162	0.000047981	-0.000003347		
7S1/2			0.295564222	0.000012325	-0.000001618		
3P3/2 -- (4)	386.944944	-894.163003	5.780924776	0.018142095		-0.001292862	0.000229515
3D3/2			6.170128431	0.004047255	-0.000020935		
3D5/2			5.865245281	0.009894512	-0.000189293		
4S1/2			3.580330438	0.004436638	-0.000590611		
4P1/2			3.646483295	0.001934380	-0.000148660		
4P3/2			3.258175865	0.003175761	-0.000463289		
4D3/2			3.378766392	0.001672560	-0.000158779		
4D5/2			3.276324555	0.003505809	-0.000545032		
4F5/2			3.405460249	0.001534742	-0.000154178		
4F7/2			3.329003555	0.001482450	-0.000437292		
5S1/2			1.903593200	0.001052638	-0.000146713		
5P1/2			1.859141795	0.000459743	-0.000039740		
5P3/2			1.655766250	0.000752501	-0.000117920		
5D3/2			1.528507958	0.000352282	-0.000035335		
5D5/2			1.476561483	0.000710997	-0.000121971		
5F5/2			0.997266640	0.000120311	-0.000012557		
5F7/2			0.956179839	0.000114171	-0.000033700		
6S1/2			0.882011564	0.000202889	-0.000028563		
6P1/2			0.791800211	0.000074847	-0.000006618		
6P3/2			0.672669576	0.000107381	-0.000017035		
7S1/2			0.295180920	0.000017139	-0.000002416		
3D3/2 -- (4)	380.386947	-885.322620	6.756743555	0.031151769		-0.000028009	0.000006501

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95 A=243 R=1.41510E-04 A.U.					
			6.689760094	0.005592499	-0.000000630		
3D5/2			3.698152889	0.001575366	-0.000041476		
4S1/2			3.721645454	0.003272598	-0.000252477		
4P1/2			3.395832938	0.001068691	-0.000027593		
4P3/2			3.409255166	0.003745569	-0.000371255		
4D3/2			3.387853988	0.001221003	-0.000018069		
4D5/2			3.392132467	0.006877989	-0.001705367		
4F5/2			3.419767206	0.000234869	-0.000027623		
4F7/2			1.931865332	0.000397908	-0.000013802		
5S1/2			1.877760618	0.000733211	-0.000060399		
5P1/2			1.685883965	0.000255827	-0.000008042		
5P3/2			1.536395530	0.000712782	-0.000078094		
5D3/2			1.497868927	0.000238252	-0.000034300		
5D5/2			0.996659407	0.000566276	-0.000143086		
5F5/2			0.963440420	0.000021535	-0.000002345		
5F7/2			0.887474485	0.000077660	-0.000002851		
6S1/2			0.794851070	0.000117999	-0.000009873		
6P1/2			0.676905837	0.000036582	-0.000001193		
6P3/2			0.295642567	0.000006572	-0.000000243		
7S1/2			6.503403190	0.025424564		-0.000004612	0.000001634
3D5/2 -- (6)	348.681047	-839.097667	3.669661236	0.001827705	-0.000041567		
4S1/2			3.724179954	0.001315794	-0.000020708		
4P1/2			3.357784964	0.002068204	-0.000090749		
4P3/2			3.458722222	0.000995382	-0.000020137		
4D3/2			3.314536091	0.003260689	-0.000232573		
4D5/2			3.457683542	0.001445693	-0.000106023		
4F5/2			3.347662274	0.004281470	-0.001191083		
4F7/2			1.924735809	0.000448820	-0.000013795		
5S1/2			1.876967855	0.000308665	-0.000006830		
5P1/2			1.677393972	0.000471844	-0.000023443		
5P3/2			1.543926653	0.000194156	-0.000004801		
5D3/2			1.485051068	0.000610912	-0.000048430		
5D5/2			1.001824108	0.000120712	-0.000008894		
5F5/2			0.957912712	0.000333513	-0.000094205		
5F7/2			0.886084065	0.000087102	-0.000002848		
6S1/2			0.794681040	0.000050125	-0.000001183		
6P1/2			0.675707187	0.000066854	-0.000003405		
6P3/2			0.295524905	0.000007365	-0.000000243		
7S1/2			2.948389352	0.001977643		-0.043537131	0.002132811
4S1/2 -- (2)	197.274307	-488.640885	2.632246470	0.000835800	-0.000035457		
4P1/2			2.479704850	0.001239575	-0.000254580		
4P3/2			2.667483439	0.000844657	-0.000079000		
4D3/2			2.619749188	0.000727275	-0.000090571		
4D5/2			2.750638991	0.000599367	-0.000049578		
4F5/2			2.727351497	0.000618833	-0.000051218		
4F7/2			1.699987933	0.000373538	-0.000163578		
5S1/2			1.688930833	0.000395687	-0.000077199		
5P1/2			1.524357543	0.000193191	-0.000041547		
5P3/2							

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95 A=243 R=1.41510E-04 A.U.					
5D3/2			1.413699082	0.000098389	-0.000011768		
5D5/2			1.371024154	0.000132556	-0.000011953		
5F5/2			0.951527813	0.000029345	-0.000001855		
5F7/2			0.916286459	0.000039577	-0.000001783		
6S1/2			0.844552125	0.000073338	-0.000033094		
6P1/2			0.764848929	0.000068507	-0.000013773		
6P3/2			0.654454707	0.000028591	-0.000006144		
7S1/2			0.292035034	0.000006209	-0.000002812		
4P1/2 -- (2)	191.164980	-478.847765	2.976129395	0.003706669		-0.008797313	0.000609621
4P3/2			2.655500574	0.000340100	-0.000011834		
4D3/2			2.515862146	0.002111200	-0.000377823		
4D5/2			2.686389741	0.000433032	-0.000015765		
4F5/2			2.738874529	0.000979296	-0.000124025		
4F7/2			2.760615947	0.000450451	-0.000014962		
5S1/2			1.734901992	0.000407777	-0.000006023		
5P1/2			1.656358977	0.000474855	-0.000139427		
5P3/2			1.537661750	0.000113751	-0.000010632		
5D3/2			1.406597038	0.000186914	-0.000031313		
5D5/2			1.376517718	0.000096220	-0.000004129		
5F5/2			0.951001701	0.000046991	-0.000003750		
5F7/2			0.917529201	0.000031226	-0.000000772		
6S1/2			0.850138164	0.000076644	-0.000012103		
6P1/2			0.760558050	0.000076684	-0.000023572		
6P3/2			0.650106294	0.000016746	-0.000001696		
7S1/2			0.292495022	0.000006452	-0.000001627		
4P3/2 -- (4)	136.162001	-397.087054	2.553710120	0.001685748		-0.000357532	0.000063128
4D3/2			2.565775383	0.000458922	-0.000012894		
4D5/2			2.421874926	0.001061036	-0.000086840		
4F5/2			2.615078251	0.000393022	-0.000015569		
4F7/2			2.562629851	0.000681897	-0.000046167		
5S1/2			1.695396238	0.000678533	-0.000105661		
5P1/2			1.663195106	0.000216003	-0.000020243		
5P3/2			1.492212323	0.000298199	-0.000055615		
5D3/2			1.395043755	0.000088475	-0.000008174		
5D5/2			1.349839437	0.000210946	-0.000020744		
5F5/2			0.942698870	0.000024518	-0.000001203		
5F7/2			0.907529242	0.000042836	-0.000002403		
6S1/2			0.843080525	0.000118763	-0.000019352		
6P1/2			0.760718942	0.000034082	-0.000003530		
6P3/2			0.650173945	0.000042009	-0.000008276		
7S1/2			0.291903675	0.000009913	-0.000001625		
4D3/2 -- (4)	126.875799	-380.518109	2.596478905	0.002338762		-0.000008841	0.000002042
4D5/2			2.580819072	0.000420137	-0.000000103		
4F5/2			2.518164149	0.001198259	-0.000119755		
4F7/2			2.633894887	0.000375646	-0.000002445		
5S1/2			1.709293027	0.000208372	-0.000008438		
5P1/2			1.655123796	0.000499690	-0.000057779		
5P3/2			1.516526185	0.000116743	-0.000005163		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM	5F7	Z=95	A=243	R=1.41510E-04	A.U.		
	5D3/2		1.377671781	0.000285891	-0.000035998		
	5D5/2		1.359288426	0.000087316	-0.000001874		
	5F5/2		0.941990622	0.000077567	-0.000007903		
	5F7/2		0.909859863	0.000024522	-0.000000396		
	6S1/2		0.845426643	0.000038233	-0.000001984		
	6P1/2		0.760019911	0.000072281	-0.000008769		
	6P3/2		0.653155656	0.000016268	-0.000000810		
	7S1/2		0.292098191	0.000003211	-0.000000172		
4D5/2 -- (6)	117.109028	-364.199468	2.523247782	0.001912785		-0.000001457	0.000000514
	4F5/2		2.602849946	0.000331029	-0.000006011		
	4F7/2		2.496116783	0.001009920	-0.000072244		
	5S1/2		1.697206038	0.000242316	-0.000008245		
	5P1/2		1.660538145	0.000146758	-0.000003515		
	5P3/2		1.502017949	0.000259145	-0.000020301		
	5D3/2		1.393340384	0.000075429	-0.000002188		
	5D5/2		1.338408031	0.000245498	-0.000022393		
	5F5/2		0.941598074	0.000021206	-0.000000898		
	5F7/2		0.905563894	0.000066814	-0.000005867		
	6S1/2		0.843307114	0.000042971	-0.000001970		
	6P1/2		0.760319710	0.000022499	-0.000000727		
	6P3/2		0.651302374	0.000034550	-0.000002845		
	7S1/2		0.291920796	0.000003597	-0.000000171		
4F5/2 -- (6)	103.516887	-340.141470	2.655708816	0.002434126		-0.000000004	0.000000002
	4F7/2		2.680262482	0.000391510	-0.000000003		
	5S1/2		1.714937550	0.000126175	-0.000000130		
	5P1/2		1.664609013	0.000176922	-0.000001035		
	5P3/2		1.519319152	0.000081747	-0.000000366		
	5D3/2		1.392643838	0.000169159	-0.000006647		
	5D5/2		1.360541484	0.000057107	-0.000000532		
	5F5/2		0.938071475	0.000113685	-0.000005586		
	5F7/2		0.912449449	0.000027310	-0.000000157		
	6S1/2		0.846493076	0.000023665	-0.000000179		
	6P1/2		0.761430276	0.000026780	-0.000000394		
	6P3/2		0.653562747	0.000011397	-0.000000096		
	7S1/2		0.292186877	0.000001992	-0.000000017		
4F7/2 -- (8)	100.199772	-334.035067	2.626310756	0.002223900		-0.000000001	0.000000000
	5S1/2		1.709319430	0.000153911	-0.000000102		
	5P1/2		1.669048690	0.000110596	-0.000000142		
	5P3/2		1.511868440	0.000134893	-0.000000851		
	5D3/2		1.398434764	0.000063471	-0.000000284		
	5D5/2		1.351568629	0.000145861	-0.000004271		
	5F5/2		0.945825422	0.000024258	-0.000000175		
	5F7/2		0.904647730	0.000101935	-0.000003855		
	6S1/2		0.845490334	0.000027384	-0.000000174		
	6P1/2		0.761683246	0.000016696	-0.000000087		
	6P3/2		0.652645516	0.000018026	-0.000000203		
	7S1/2		0.292102743	0.000002294	-0.000000017		
5S1/2 -- (2)	63.042356	-219.491544	1.430433858	0.000203696		-0.011546028	0.000565234

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM 5F7 Z=95 A=243 R=1.41510E-04 A.U.							
5P1/2			1.243631014	0.000130905	-0.000012128		
5P3/2			1.176452417	0.000184820	-0.000047801		
5D3/2			1.178711003	0.000125276	-0.000016264		
5D5/2			1.154549497	0.000068741	-0.000016861		
5F5/2			0.867221316	0.000040069	-0.000005107		
5F7/2			0.838691492	0.000019796	-0.000004741		
6S1/2			0.777128287	0.000031237	-0.000015585		
6P1/2			0.715855881	0.000019484	-0.000004435		
6P3/2			0.618915868	0.000012001	-0.000004020		
7S1/2			0.286581367	0.000002651	-0.000001351		
5P1/2 -- (2)	58.077891	-209.052320	1.381982686	0.000348446		-0.002213496	0.000153182
5P3/2			1.231534465	0.00031609	-0.000001584		
5D3/2			1.096514067	0.000323216	-0.000072765		
5D5/2			1.160978604	0.000027642	-0.000002800		
5F5/2			0.859254555	0.000065788	-0.000013333		
5F7/2			0.837018862	0.000010329	-0.000001414		
6S1/2			0.784187861	0.000046924	-0.000007530		
6P1/2			0.703276169	0.000030666	-0.000010474		
6P3/2			0.620570871	0.000006247	-0.000000713		
7S1/2			0.287068176	0.000003807	-0.000000633		
5P3/2 -- (4)	41.716934	-178.152082	1.185747397	0.000158429		-0.000088628	0.000015627
5D3/2			1.119877390	0.000060614	-0.000004023		
5D5/2			1.052837853	0.000117207	-0.000022639		
5F5/2			0.839947148	0.000029096	-0.000002609		
5F7/2			0.804931203	0.000030313	-0.000007060		
6S1/2			0.767288054	0.000077198	-0.000012426		
6P1/2			0.704509871	0.000016107	-0.000001623		
6P3/2			0.608213987	0.000016859	-0.000003544		
7S1/2			0.285779440	0.000005958	-0.000000994		
5D3/2 -- (4)	33.386179	-157.046015	1.070701877	0.000166874		-0.000001902	0.000000439
5D5/2			1.063603160	0.000029897	-0.000000010		
5F5/2			0.779258813	0.000096935	-0.000021203		
5F7/2			0.795358878	0.000009759	-0.000000363		
6S1/2			0.753705248	0.000019575	-0.000000665		
6P1/2			0.684415156	0.000046458	-0.000005563		
6P3/2			0.605831931	0.000008106	-0.000000452		
7S1/2			0.284784504	0.000001548	-0.000000072		
5D5/2 -- (6)	30.643902	-150.661787	1.039015166	0.000134928		-0.000000310	0.000000109
5F5/2			0.809746235	0.000021710	-0.000001216		
5F7/2			0.759236714	0.000060547	-0.000013270		
6S1/2			0.747119572	0.000024381	-0.000000566		
6P1/2			0.689044571	0.000011528	-0.000000246		
6P3/2			0.600284088	0.000019843	-0.000001965		
7S1/2			0.284322747	0.000001806	-0.000000066		
5F5/2 -- (6)	13.645913	-96.237339	0.662891815	0.000049061		-0.000000000	0.000000000
5F7/2			0.657510943	0.000007397	-0.000000000		
6S1/2			0.640812665	0.000007925	-0.000000346		
6P1/2			0.590121130	0.000009898	-0.000000427		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
AMERICIUM 5F7 Z=95 A=243 R=1.41510E-04 A.U.							
6P3/2			0.540907852	0.000003528	-0.000006037		
7S1/2			0.275623159	0.000000605	-0.000000000		
5F7/2 -- (1)	12.645940	-92.328153	0.000000000	0.000000000		-0.000000000	0.000000000
6S1/2			0.627025306	0.000009516	-0.000000368		
6P1/2			0.591590332	0.000005870	-0.000000055		
6P3/2			0.526796567	0.000006810	-0.000000127		
7S1/2			0.273935145	0.000000754	-0.000000000		
6S1/2 -- (2)	14.575441	-91.385681	0.646040545	0.000015750		-0.002277896	0.000111495
6P1/2			0.538401709	0.000016878	-0.000002274		
6P3/2			0.496792383	0.000017336	-0.000004820		
7S1/2			0.272268188	0.000000981	-0.000000473		
6P1/2 -- (2)	11.381749	-80.532095	0.576560187	0.000021451		-0.000364536	0.000025220
6P3/2			0.500791430	0.000001822	-0.000000091		
7S1/2			0.271668020	0.000002038	-0.000000031		
6P3/2 -- (4)	7.310667	-66.884204	0.473435030	0.000008543		-0.000012767	0.000002250
7S1/2			0.264959054	0.000002891	-0.000000407		
7S1/2 -- (2)	1.421978	-28.685572	0.216699496	0.000000498		-0.000193091	0.000009451
ETDT	-30449.73823	37929.13070	-79243.36434	10831.90796	47.298178108	-4.972768970	-10.288309748
							0.550338075
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
1S1/2 -- (2)	7322.001670	-12688.830443	75.203449783	13.877697841		-4.341614154	0.235626762
2S1/2			23.802055241	0.789793126	-0.097846537		
2P1/2			29.931212599	1.625480607	-0.195392845		
2P3/2			22.818502036	0.658306238	-0.190092481		
3S1/2			9.949786939	0.175881664	-0.023251095		
3P1/2			11.221344116	0.328738889	-0.038523351		
3P3/2			9.259833669	0.153141677	-0.045568538		
3D3/2			9.439555148	0.006636658	-0.000722229		
3D5/2			8.938485489	0.002592847	-0.000829005		
4S1/2			4.626972467	0.047896084	-0.006422907		
4P1/2			4.895852757	0.085373699	-0.009946298		
4P3/2			4.171251229	0.040489818	-0.012132397		
4D3/2			4.071024113	0.002004618	-0.000218907		
4D5/2			3.893883997	0.000785131	-0.000253445		
4F5/2			3.646397237	0.000006526	-0.000000649		
4F7/2			3.579730808	0.000002534	-0.000000833		
5S1/2			2.200053200	0.012781169	-0.001720442		
5P1/2			2.193431208	0.021403475	-0.002489843		
5P3/2			1.896916862	0.010038641	-0.003013321		
5D3/2			1.695463333	0.000435205	-0.000047562		
5D5/2			1.625781899	0.000168640	-0.000054556		
5F5/2			1.096365630	0.000000782	-0.000000078		
5F7/2			1.062363599	0.000000293	-0.000000096		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
6S1/2			0.960566583	0.002580122	-0.000347630		
6P1/2			0.870712283	0.003641180	-0.000423429		
6P3/2			0.728921829	0.001506621	-0.000452420		
6D3/2			0.418332527	0.000022709	-0.000002482		
7S1/2			0.318877546	0.000238533	-0.000032143		
2S1/2 -- (2)	1851.363047	-3241.775898	17.222253340	0.325239049		-0.715796861	0.036154322
2P1/2			17.326239877	0.099663358	-0.000102986		
2P3/2			15.388028052	0.130601268	-0.006124282		
3S1/2			8.137434105	0.039416518	-0.009409730		
3P1/2			9.008251125	0.068347099	-0.010412842		
3P3/2			7.967004259	0.037026463	-0.003976187		
3D3/2			8.871857924	0.036150109	-0.004913548		
3D5/2			8.490406056	0.015185289	-0.004824120		
4S1/2			4.152061133	0.010639899	-0.002679688		
4P1/2			4.325059314	0.018393987	-0.002880253		
4P3/2			3.839501531	0.010167490	-0.001244011		
4D3/2			3.925348267	0.007946460	-0.001141081		
4D5/2			3.779450377	0.003527006	-0.001149364		
4F5/2			3.641573810	0.000525216	-0.000068298		
4F7/2			3.575571715	0.000186753	-0.000066487		
5S1/2			2.074391056	0.002831808	-0.000721208		
5P1/2			2.050485923	0.004641792	-0.000730950		
5P3/2			1.815209789	0.002538920	-0.000319408		
5D3/2			1.664884059	0.001611010	-0.000234196		
5D5/2			1.602057941	0.000717243	-0.000234501		
5F5/2			1.095806823	0.000060191	-0.000007886		
5F7/2			1.061899074	0.000020685	-0.000007419		
6S1/2			0.935250228	0.000571271	-0.000145874		
6P1/2			0.846399446	0.000790762	-0.000124676		
6P3/2			0.716676190	0.000381597	-0.000048288		
6D3/2			0.416745351	0.000083151	-0.000012112		
7S1/2			0.316537780	0.000052809	-0.000013490		
2P1/2 -- (2)	1854.138022	-3245.621908	21.642962574	0.750140269		-0.132880738	0.009606392
2P3/2			18.124380962	0.078163014	-0.000426161		
3S1/2			8.718693584	0.026918537	-0.001800472		
3P1/2			9.013402635	0.063629453	-0.009218568		
3P3/2			8.340032754	0.019878954	-0.000525443		
3D3/2			8.898923299	0.104908075	-0.024957265		
3D5/2			8.715951304	0.002920068	-0.000720306		
4S1/2			4.295370714	0.007253356	-0.000543486		
4P1/2			4.341197293	0.016031642	-0.002554158		
4P3/2			3.933029341	0.005268467	-0.000164050		
4D3/2			3.935412619	0.024638668	-0.006035420		
4D5/2			3.834519204	0.000804008	-0.000187383		
4F5/2			3.642766788	0.000595719	-0.000124729		
4F7/2			3.577916578	0.000032276	-0.000012388		
5S1/2			2.111759658	0.001929558	-0.000148455		
5P1/2			2.055323079	0.003990105	-0.000648928		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM	5F7 6D1	Z=96 A=247 R=1.42282E-04 A.U.					
			1.838125534	0.001306254	-0.000042186		
			1.667134009	0.005070478	-0.001249876		
			1.613363629	0.000169691	-0.000039000		
			1.095945675	0.000068615	-0.000014455		
			1.062159945	0.000003612	-0.000001390		
			0.942751914	0.000389211	-0.000030137		
			0.847251955	0.000677689	-0.000110718		
			0.720106853	0.000196042	-0.000006380		
			0.416863260	0.000262340	-0.0000064732		
			0.317230702	0.000035978	-0.000002789		
2P3/2 -- (4)	1113.646869	-2298.217959	16.546876243	0.295552952		-0.004810622	0.000892090
			8.362019060	0.032743228	-0.002786419		
			9.018672213	0.019708176	-0.000944202		
			7.838376107	0.037329779	-0.003516567		
			8.915993318	0.031666651	-0.003019202		
			8.373355173	0.051719317	-0.014710839		
			4.201181778	0.008213739	-0.000742216		
			4.326569769	0.004938556	-0.000272465		
			3.811743811	0.009286054	-0.000972141		
			3.936855190	0.007029437	-0.000674811		
			3.756430335	0.011368806	-0.003347553		
			3.641234729	0.000462167	-0.000044593		
			3.573891006	0.000395208	-0.000128159		
			2.086788044	0.002149711	-0.000197400		
			2.050784619	0.001228817	-0.000070059		
			1.808653848	0.002268372	-0.000242958		
			1.667285833	0.001431681	-0.000137721		
			1.597539095	0.002285777	-0.000677552		
			1.095770791	0.000052621	-0.000005111		
			1.061717793	0.000043410	-0.000014189		
			0.937718645	0.000431920	-0.000039820		
			0.846447134	0.000208701	-0.000011987		
			0.715702465	0.000339354	-0.000036522		
			0.416869870	0.000073955	-0.000007117		
			0.316765487	0.000039901	-0.000003681		
3S1/2 -- (2)	590.902851	-1174.155918	6.514625505	0.021350279		-0.169902021	0.008492616
			6.037991718	0.007237759	-0.000073606		
			5.596329663	0.010197470	-0.001263404		
			6.439634967	0.006396061	-0.000244417		
			6.307221257	0.008075703	-0.000312655		
			3.606570591	0.003660375	-0.001282760		
			3.748940199	0.005283552	-0.000908314		
			3.377392732	0.002650368	-0.000344024		
			3.476324707	0.001860497	-0.000178750		
			3.377801381	0.001859153	-0.000147332		
			3.495382134	0.001878375	-0.000264067		
			3.441650713	0.000851006	-0.000258037		
			1.937811079	0.000968643	-0.000352109		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
5P1/2			1.910319521	0.001382865	-0.000245564		
5P3/2			1.7J4603507	0.000694042	-0.000095188		
5D3/2			1.574564626	0.000414799	-0.000043741		
5D5/2			1.522174463	0.000376947	-0.000036040		
5F5/2			1.080704001	0.000173684	-0.000025432		
5F7/2			1.048530161	0.000080761	-0.000024171		
6S1/2			0.9J8642784	0.000195010	-0.000071350		
6P1/2			0.822698299	0.000236932	-0.000042316		
6P3/2			0.700189546	0.000105212	-0.000014579		
6D3/2			0.412087433	0.000021692	-0.000002316		
7S1/2			0.314027574	0.000018021	-0.000006600		
3P1/2 -- (2)	585.793951	-1167.400713	6.988632520	0.042894696		-0.035404709	0.002504142
3P3/2			6.163132752	0.004072843	-0.000077967		
3D3/2			6.316166103	0.015039534	-0.001375853		
3D5/2			6.642084109	0.005946759	-0.000062635		
4S1/2			3.739063958	0.003059441	-0.000363474		
4P1/2			3.687988886	0.005312179	-0.001206083		
4P3/2			3.441433222	0.001380245	-0.000085209		
4D3/2			3.503312819	0.004037548	-0.000580626		
4D5/2			3.422198805	0.001288792	-0.000042218		
4F5/2			3.487411208	0.003191601	-0.000705965		
4F7/2			3.475134359	0.000345634	-0.000074695		
5S1/2			1.967880904	0.000791055	-0.000101734		
5P1/2			1.899941191	0.001301176	-0.000313716		
5P3/2			1.719014360	0.000349681	-0.000024146		
5D3/2			1.580480285	0.000918967	-0.000144908		
5D5/2			1.530873374	0.000254258	-0.000010126		
5F5/2			1.080127532	0.000300142	-0.000068532		
5F7/2			1.051707083	0.000035546	-0.000007224		
6S1/2			0.913905386	0.000158457	-0.000020719		
6P1/2			0.821083257	0.000220211	-0.000053667		
6P3/2			0.702312811	0.000052671	-0.000033713		
6D3/2			0.412395689	0.000048208	-0.000007694		
7S1/2			0.314566663	0.000014631	-0.000001918		
3P3/2 -- (4)	397.396608	-916.050514	5.857065365	0.018850750		-0.001384403	0.000251151
3D3/2			6.252927333	0.004203326	-0.000021338		
3D5/2			5.941492884	0.010269205	-0.000196526		
4S1/2			3.639605374	0.004692056	-0.0000627062		
4P1/2			3.739070287	0.002042945	-0.000157176		
4P3/2			3.306670967	0.003318275	-0.000484604		
4D3/2			3.432970846	0.001757381	-0.000166929		
4D5/2			3.327272582	0.003669803	-0.000571277		
4F5/2			3.466269920	0.001615082	-0.000162202		
4F7/2			3.387428761	0.001560423	-0.000460132		
5S1/2			1.943130895	0.001122038	-0.000157014		
5P1/2			1.900505066	0.000490671	-0.000042495		
5P3/2			1.688941635	0.000796266	-0.000124960		
5D3/2			1.566029428	0.000377750	-0.000037920		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
5D5/2			1.512317991	0.000759864	-0.000130652		
5F5/2			1.077961907	0.000142998	-0.000014939		
5F7/2			1.043762066	0.000138255	-0.000040785		
6S1/2			0.908975596	0.000221353	-0.000031292		
6P1/2			0.821033807	0.000082780	-0.000007337		
6P3/2			0.697888426	0.000118688	-0.000018861		
6D3/2			0.411648932	0.000019650	-0.000001987		
7S1/2			0.314111831	0.000020391	-0.000002867		
3D3/2 -- (4)	390.749881	-907.121297	6.849698111	0.032390574		-0.000030822	0.000007316
3D5/2			6.778414025	0.005803145	-0.000000685		
4S1/2			3.760459325	0.001652756	-0.000043614		
4P1/2			3.786462627	0.003448588	-0.000267807		
4P3/2			3.447233149	0.001116306	-0.000028851		
4D3/2			3.464543847	0.003921215	-0.000389523		
4D5/2			3.441418193	0.001277166	-0.000018933		
4F5/2			3.453018645	0.007245588	-0.001796744		
4F7/2			3.480853250	0.000247602	-0.000029102		
5S1/2			1.972400622	0.000421542	-0.000014683		
5P1/2			1.919904116	0.000780798	-0.000064730		
5P3/2			1.720075516	0.000270673	-0.000008531		
5D3/2			1.574353089	0.0000761030	-0.000083638		
5D5/2			1.534573741	0.000254388	-0.000004609		
5F5/2			1.077312131	0.000675087	-0.000170695		
5F7/2			1.052370583	0.000026251	-0.000002852		
6S1/2			0.914766176	0.000084249	-0.000003109		
6P1/2			0.824328772	0.000130189	-0.000010961		
6P3/2			0.702461378	0.000040431	-0.000001323		
6D3/2			0.412091677	0.000039027	-0.000004349		
7S1/2			0.314645508	0.000007777	-0.000000290		
3D5/2 -- (6)	357.491166	-858.693433	6.586482370	0.026380870		-0.000005032	0.000001825
4S1/2			3.730636174	0.001915595	-0.000043690		
4P1/2			3.788287372	0.001380231	-0.000021761		
4P3/2			3.407912655	0.002157996	-0.000094929		
4D3/2			3.514354049	0.001041565	-0.000021134		
4D5/2			3.366086196	0.003406809	-0.000243659		
4F5/2			3.519947727	0.001523447	-0.000111616		
4F7/2			3.406559111	0.004508870	-0.0001254396		
5S1/2			1.964863614	0.000474789	-0.000014672		
5P1/2			1.918881029	0.000327505	-0.000007286		
5P3/2			1.711184725	0.000498408	-0.000024848		
5D3/2			1.582036542	0.000207161	-0.000005150		
5D5/2			1.521136698	0.000651135	-0.000051809		
5F5/2			1.083269967	0.000143972	-0.000010599		
5F7/2			1.045816045	0.000404185	-0.000114221		
6S1/2			0.913260893	0.000094342	-0.000003105		
6P1/2			0.824111064	0.000055121	-0.000001309		
6P3/2			0.7031150290	0.000073750	-0.0000033771		
6D3/2			0.412471514	0.000010665	-0.000000273		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
4S1/2 -- (2)	205.297253	-504.261237	0.314506573	0.000008701	-0.000000289	-0.047011858	0.002343865
4P1/2			2.999391778	0.002086772			
4P3/2			2.679051735	0.000877463	-0.000036468		
4D3/2			2.520320418	0.001317031	-0.000274421		
4D5/2			2.712633398	0.000890494	-0.000083645		
4F5/2			2.663190373	0.000762602	-0.000096113		
4F7/2			2.800856989	0.000631078	-0.000052097		
5S1/2			2.776781717	0.000652347	-0.000053881		
5P1/2			1.734517850	0.000398468	-0.000174521		
5P3/2			1.725653575	0.000426592	-0.000083129		
5D3/2			1.554423348	0.000203599	-0.000044658		
5D5/2			1.447415752	0.000105543	-0.000012696		
5F5/2			1.403359204	0.000141718	-0.000012924		
5F7/2			1.025414539	0.000035113	-0.000002224		
6S1/2			0.997199004	0.000048043	-0.000002169		
6P1/2			0.869696613	0.000080114	-0.000036159		
6P3/2			0.792346759	0.000076575	-0.000015379		
6D3/2			0.678420170	0.000031436	-0.000006881		
7S1/2			0.405632506	0.000005514	-0.000000683		
4P1/2 -- (2)	199.126461	-494.419742	0.310515267	0.000007398	-0.000003351	-0.009794477	0.000689088
4P3/2			3.029933120	0.003917537			
4D3/2			2.699473884	0.000353664	-0.000013105		
4D5/2			2.559489357	0.002238152	-0.000403122		
4F5/2			2.731744491	0.000452219	-0.000016856		
4F7/2			2.759261818	0.001032574	-0.000130696		
5S1/2			2.811601111	0.000475259	-0.000015792		
5P1/2			1.770624274	0.000433318	-0.000064434		
5P3/2			1.692305774	0.000508567	-0.000149407		
5D3/2			1.568333242	0.000119484	-0.000011373		
5D5/2			1.440177229	0.000200293	-0.000033913		
5F5/2			1.409196479	0.000102765	-0.000004470		
5F7/2			1.024897404	0.000056259	-0.000004500		
6S1/2			0.998707723	0.000037920	-0.000000446		
6P1/2			0.875605899	0.000083397	-0.000013181		
6P3/2			0.787813490	0.000085119	-0.000026185		
6D3/2			0.680223144	0.000018391	-0.000001896		
7S1/2			0.405319336	0.000010445	-0.000001777		
4P3/2 -- (4)	140.555742	-407.746585	0.311045379	0.000007655	-0.000001220	-0.000385123	0.000069480
4D3/2			2.592484449	0.001765433			
4D5/2			2.606545305	0.000479192	-0.000013230		
4F5/2			2.459734018	0.001110285	-0.000090188		
4F7/2			2.659658383	0.000411367	-0.000016034		
5S1/2			2.606179053	0.000715852	-0.000047635		
5P1/2			1.728957676	0.000728564	-0.000113621		
5P3/2			1.698317344	0.000232608	-0.000021806		
5D3/2			1.521001841	0.000316689	-0.000059248		
5D5/2			1.427634283	0.000095620	-0.000008883		
			1.381045393	0.000227046	-0.000022495		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.							
5F5/2			1.015014099	0.000029670	-0.000001485		
5F7/2			0.986738672	0.000052104	-0.000003023		
6S1/2			0.867992717	0.000130206	-0.000021262		
6P1/2			0.787809061	0.000037957	-0.000003939		
6P3/2			0.673772132	0.000046592	-0.000009211		
6D3/2			0.404615375	0.000005153	-0.000000512		
7S1/2			0.310349958	0.000011843	-0.000001946		
4D3/2 -- (4)	131.177480	-391.102852	2.639628652	0.002456584		-0.000009813	0.000002318
4D5/2			2.622894148	0.000440163	-0.000000114		
4F5/2			2.563392682	0.001254984	-0.000123695		
4F7/2			2.680553499	0.000395888	-0.000002537		
5S1/2			1.743821635	0.000221835	-0.000009029		
5P1/2			1.690509992	0.000535745	-0.000062192		
5P3/2			1.546320735	0.000123808	-0.000005492		
5D3/2			1.410001641	0.000306628	-0.000038859		
5D5/2			1.391085481	0.000093536	-0.000002024		
5F5/2			1.014377038	0.000094500	-0.000009914		
5F7/2			0.989581847	0.000029657	-0.000000492		
6S1/2			0.870556092	0.000041639	-0.000002177		
6P1/2			0.787151882	0.000080113	-0.000009765		
6P3/2			0.677012695	0.000018020	-0.000000901		
6D3/2			0.403844978	0.000015474	-0.000002082		
7S1/2			0.310581553	0.000003813	-0.000000206		
4D5/2 -- (6)	120.902461	-373.996144	2.563654908	0.002005970		-0.000001604	0.000000580
4F5/2			2.648345525	0.000346826	-0.000006152		
4F7/2			2.539772826	0.001058646	-0.000074188		
5S1/2			1.731165780	0.000257807	-0.000008814		
5P1/2			1.695862127	0.000156637	-0.000003769		
5P3/2			1.531293390	0.000274754	-0.000021585		
5D3/2			1.426035961	0.000080842	-0.000002367		
5D5/2			1.369371636	0.000262902	-0.000024155		
5F5/2			1.013817911	0.000025660	-0.000001117		
5F7/2			0.984516074	0.000082246	-0.000007507		
6S1/2			0.868285450	0.000046738	-0.000002161		
6P1/2			0.787425991	0.000024851	-0.000000810		
6P3/2			0.675008163	0.000038229	-0.000003160		
6D3/2			0.404531971	0.000004125	-0.000000137		
7S1/2			0.310374368	0.000004264	-0.000000205		
4F5/2 -- (6)	107.281494	-350.054944	2.706826202	0.002571491		-0.000000005	0.000000002
4F7/2			2.731557360	0.000413800	-0.000000003		
5S1/2			1.750595504	0.000134276	-0.000000151		
5P1/2			1.701263916	0.000188843	-0.000001151		
5P3/2			1.549871934	0.000086888	-0.000000404		
5D3/2			1.426108430	0.000181232	-0.000007175		
5D5/2			1.392904056	0.000061257	-0.000000577		
5F5/2			1.010175760	0.000135538	-0.000006798		
5F7/2			0.992865518	0.000033228	-0.000000196		
6S1/2			0.871844060	0.000025779	-0.000000201		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM 5F7 601 Z=96 A=247 R=1.42282E-04 A.U.							
6P1/2			0.788790544	0.000029598	-0.000000447		
6P3/2			0.677542275	0.000012651	-0.000000110		
6D3/2			0.404600165	0.000008793	-0.000000366		
7S1/2			0.310698317	0.000002367	-0.000000021		
4F7/2 -- (8)	103.786886	-343.654802	2.676184604	0.002348073		-0.000000001	0.000000001
5S1/2			1.744747631	0.000163567	-0.000000120		
5P1/2			1.705656741	0.000117904	-0.000000158		
5P3/2			1.542216070	0.000143102	-0.000000938		
5D3/2			1.431951348	0.000068035	-0.000000312		
5D5/2			1.383625686	0.000156088	-0.000000460		
5F5/2			1.018984245	0.000028977	-0.000000214		
5F7/2			0.983770486	0.000123487	-0.0000004771		
6S1/2			0.870774256	0.000029791	-0.000000195		
6P1/2			0.789035509	0.000018440	-0.000000099		
6P3/2			0.676555217	0.000019971	-0.000000231		
6D3/2			0.404831532	0.000003394	-0.000000022		
7S1/2			0.310600433	0.000002720	-0.000000021		
5S1/2 -- (2)	66.232045	-227.268023	1.460386552	0.000217889		-0.012599759	0.000627747
5P1/2			1.270701429	0.000138350	-0.000012637		
5P3/2			1.200876143	0.000200179	-0.000051925		
5D3/2			1.206076875	0.000134376	-0.000017432		
5D5/2			1.181205648	0.000073853	-0.000018112		
5F5/2			0.928743278	0.000047545	-0.000006064		
5F7/2			0.906734014	0.000024080	-0.000005731		
6S1/2			0.799439155	0.000034319	-0.000017155		
6P1/2			0.740523599	0.000022009	-0.000005003		
6P3/2			0.640692141	0.000013489	-0.000004555		
6D3/2			0.394867723	0.000004132	-0.000000653		
7S1/2			0.304326912	0.000003176	-0.000001623		
5P1/2 -- (2)	61.178446	-216.757863	1.412987829	0.000374246		-0.002495757	0.000175346
5P3/2			1.257668122	0.000033537	-0.000001792		
5D3/2			1.122658669	0.000348654	-0.000078510		
5D5/2			1.188378009	0.000029655	-0.000003032		
5F5/2			0.909781355	0.000077911	-0.000015783		
5F7/2			0.905063591	0.000012659	-0.000001707		
6S1/2			0.806967853	0.000051184	-0.000008232		
6P1/2			0.727355995	0.000034250	-0.000011743		
6P3/2			0.642535959	0.000006896	-0.000000807		
6D3/2			0.392741471	0.000008460	-0.000002179		
7S1/2			0.304890460	0.000004524	-0.000000755		
5P3/2 -- (4)	43.600894	-183.924517	1.209520624	0.000168788		-0.000096734	0.000017427
5D3/2			1.145130712	0.000064213	-0.000004205		
5D5/2			1.076399207	0.000124842	-0.000023883		
5F5/2			0.897398249	0.000034022	-0.000003032		
5F7/2			0.867466623	0.000036436	-0.000008351		
6S1/2			0.788958074	0.000085346	-0.000013748		
6P1/2			0.728320458	0.000018165	-0.000001832		
6P3/2			0.629262220	0.000018820	-0.000003982		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CURIUM	5F7 6D1	2=96	A=247 R=1.42282E-04 A.U.				
5D3/2 --	6D3/2 7S1/2 (4)	35.175845	-162.826530	0.392405269 0.303397319 1.097105044	0.000001786 0.000007155 0.000180057	-0.000000157 -0.000000196 -0.000002156	0.000000509
	5D5/2 5F5/2 5F7/2 6S1/2 6P1/2 6P3/2 6D3/2 7S1/2			1.089637572 0.830693847 0.857502843 0.775662847 0.707798414 0.627109899 0.387900491 0.302335103	0.000032165 0.000112290 0.000011995 0.000021574 0.000052069 0.000009040 0.000005819 0.000001857	-0.000000012 -0.000024364 -0.000000428 -0.000000750 -0.000006280 -0.000000508 -0.000000749 -0.000000089	
5D5/2 --	(6) 5F5/2 5F7/2 6S1/2 6P1/2 6P3/2 6D3/2 7S1/2	32.253972	-156.114526	1.064293117 0.864344215 0.816554504 0.768768976 0.712513035 0.621276718 0.389706184 0.301808965	0.000145436 0.000025237 0.000071490 0.000026781 0.000012850 0.000022112 0.000001555 0.000002158	-0.000000349 -0.000001388 -0.000015409 -0.000000639 -0.000000278 -0.000002207 -0.000000046 -0.000000081	0.0000006126
5F5/2 --	(6) 5F7/2 6S1/2 6P1/2 6P3/2 6D3/2 7S1/2	15.776912	-105.251198	0.726004707 0.725736225 0.678663770 0.626317703 0.571988557 0.369024876 0.294358149 0.000000000	0.000062053 0.000009577 0.000009094 0.000011485 0.000004108 0.000003000 0.000000762 0.000000000	-0.000000000 -0.000000000 -0.000000341 -0.000000386 -0.000000028 -0.000000023 -0.000000000 -0.000000000	0.000000000
5F7/2 --	(1) 6S1/2 6P1/2 6P3/2 6D3/2 7S1/2	14.842763	-101.986980	0.669233500 0.631910931 0.561193583 0.373136214 0.293414052	0.000011376 0.000007096 0.000008092 0.000001332 0.000000946	-0.000000370 -0.000000051 -0.000000097 -0.000000000 -0.000000000	0.000000000
6S1/2 --	(2) 6P1/2 6P3/2 6D3/2 7S1/2	15.673664	-95.458654	0.665695269 0.556529832 0.514030707 0.367367510 0.288437014	0.000017358 0.000018386 0.000019605 0.000005160 0.000001191	-0.000000000 -0.000002458 -0.000005440 -0.000000703 -0.000000582	0.000126838
6P1/2 --	(2) 6P3/2 6D3/2 7S1/2	12.410711	-84.643798	0.597770294 0.519383189 0.347594358 0.287951684 0.491126593	0.000024068 0.00002032 0.000014527 0.000002458 0.000009593	-0.000000109 -0.000003396 -0.000000378 -0.000014559 -0.000000293	0.000029932
6P3/2 --	(4) 6D3/2 7S1/2	7.971724	-70.250016	0.347891354 0.280629880 0.000000000 0.240981210 0.230511890	0.00002998 0.00003547 0.000000000 0.000000413 0.000000605	-0.000000565 -0.000000007 -0.000235444 0.000011728	0.000002622
6D3/2 --	(1) 7S1/2	2.496587	-40.163163				
7S1/2 --	(2)	1.666107	-30.912202				

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
CURIUM 5F7 6D1 Z=96 A=247 R=1.42282E-04 A.U.								
ETOT	-31290.81706	39222.53909	-81648.02390	11101.03146	49.169405668	-5.162481647	-10.968395420	0.597764429
BERKELIUM 5F9 Z=97 A=247 R=1.42282E-04 A.U.								
1S1/2 -- (2)	7575.694941	-13077.265201	76.494583128	14.390188101		-4.615325002	0.255051653	
2S1/2			24.235371043	0.822329601	-0.102072100			
2P1/2			30.545602685	1.691392869	-0.201565121			
2P3/2			23.103797040	0.679022040	-0.196054168			
3S1/2			10.127769555	0.183314187	-0.024273296			
3P1/2			11.440006259	0.341988699	-0.039676680			
3P3/2			9.387458907	0.158657226	-0.047202172			
3D3/2			9.570310643	0.006841471	-0.000739666			
3D5/2			9.050956650	0.002669950	-0.000853416			
4S1/2			4.713667335	0.050100598	-0.006729253			
4P1/2			4.995028903	0.089155963	-0.010279953			
4P3/2			4.237663172	0.042180495	-0.012637048			
4D3/2			4.139588582	0.002082897	-0.000225960			
4D5/2			3.955906583	0.000815332	-0.000263126			
4F5/2			3.711878884	0.000006832	-0.000000675			
4F7/2			3.642750358	0.000002657	-0.000000873			
5S1/2			2.248433991	0.013491443	-0.001818970			
5P1/2			2.245925277	0.022585620	-0.002600042			
5P3/2			1.933870753	0.010553367	-0.003167390			
5D3/2			1.731938073	0.000457795	-0.000049702			
5D5/2			1.658581221	0.000177072	-0.000057271			
5F5/2			1.103088931	0.000000810	-0.000000080			
5F7/2			1.060953422	0.000000300	-0.000000099			
6S1/2			0.972195308	0.002662213	-0.000359269			
6P1/2			0.877352897	0.003703012	-0.000426132			
6P3/2			0.724432132	0.001485217	-0.000445932			
7S1/2			0.336810703	0.000214050	-0.000028890			
2S1/2 -- (2)	1922.809902	-3349.684156	17.519578531	0.340775212		-0.768425887	0.039487319	
2P1/2			17.643915318	0.104469454	-0.000104496			
2P3/2			15.610888024	0.135730364	-0.006642269			
3S1/2			8.272918495	0.041328881	-0.009850211			
3P1/2			9.166829140	0.071792620	-0.010918008			
3P3/2			8.078234289	0.038132871	-0.004058517			
3D3/2			8.997664961	0.037533740	-0.005096545			
3D5/2			8.601564765	0.015725561	-0.005061868			
4S1/2			4.225670666	0.011196339	-0.002815706			
4P1/2			4.406093561	0.019394481	-0.003030944			
4P3/2			3.899898442	0.010537369	-0.001279569			
4D3/2			3.991383953	0.008320496	-0.001193407			
4D5/2			3.840126149	0.003684892	-0.001202694			
4F5/2			3.706968829	0.000549861	-0.000071418			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM 5F9 Z=97 A=247 R=1.42282E-04 A.U.							
4F7/2			3.638530311	0.000195292	-0.000069533		
5S1/2			2.118123950	0.003007039	-0.000764793		
5P1/2			2.096868575	0.004945612	-0.000777250		
5P3/2			1.849928798	0.002655999	-0.000331790		
5D3/2			1.700450231	0.001706631	-0.000247833		
5D5/2			1.634319322	0.000757257	-0.000248002		
5F5/2			1.102526816	0.000062253	-0.000038148		
5F7/2			1.060493476	0.000021104	-0.000007572		
6S1/2			0.946533147	0.000592965	-0.000151212		
6P1/2			0.852918646	0.000811986	-0.000127769		
6P3/2			0.712635261	0.000374346	-0.000047041		
7S1/2			0.304747999	0.000047671	-0.000012161		
2P1/2 -- (2)	1926.622131	-3354.764649	22.056584008	0.786777542		-0.146967726	0.010788379
2P3/2			18.391177681	0.080588423	-0.000464372		
3S1/2			8.870118582	0.028237087	-0.001879193		
3P1/2			9.173069494	0.066849031	-0.009654922		
3P3/2			8.459398224	0.020590483	-0.000544036		
3D3/2			9.026512206	0.108685887	-0.025853438		
3D5/2			8.828770553	0.003002503	-0.000744328		
4S1/2			4.373533146	0.007637913	-0.000569601		
4P1/2			4.422963769	0.016913705	-0.002686767		
4P3/2			3.995965317	0.005489211	-0.000170729		
4D3/2			4.001992495	0.025745735	-0.006305566		
4D5/2			3.896113257	0.000833480	-0.000195325		
4F5/2			3.708197224	0.000621702	-0.000130129		
4F7/2			3.640917672	0.000033606	-0.000012909		
5S1/2			2.157032283	0.002050479	-0.000157050		
5P1/2			2.101972175	0.004253885	-0.000689912		
5P3/2			1.873678091	0.001373535	-0.000044314		
5D3/2			1.702845739	0.005361514	-0.001321473		
5D5/2			1.645937238	0.000177821	-0.000041092		
5F5/2			1.102668096	0.000070750	-0.000014902		
5F7/2			1.060752644	0.000003669	-0.000001414		
6S1/2			0.954168073	0.000404296	-0.000031166		
6P1/2			0.853785400	0.000696306	-0.000113450		
6P3/2			0.715969193	0.000193303	-0.000006285		
7S1/2			0.305361359	0.000032503	-0.000002508		
2P3/2 -- (4)	1140.194560	-2350.485830	16.745448494	0.305537808		-0.005125871	0.000971651
3S1/2			8.494438067	0.034287940	-0.002940560		
3P1/2			9.165708559	0.020601604	-0.000988684		
3P3/2			7.940663669	0.038691793	-0.003648560		
3D3/2			9.036562553	0.032859029	-0.003126536		
3D5/2			8.477929039	0.053600396	-0.015246711		
4S1/2			4.273955514	0.008617779	-0.000783965		
4P1/2			4.404657067	0.005177227	-0.000286082		
4P3/2			3.869765937	0.009672212	-0.001013773		
4D3/2			4.001773287	0.007337824	-0.000702821		
4D5/2			3.819467818	0.011863715	-0.003493947		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(N-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
4F5/2			3.706529222	0.000488751	-0.000047104		
4F7/2			3.636717363	0.000417516	-0.000135419		
5S1/2			2.130390657	0.002274988	-0.000210282		
5P1/2			2.096424763	0.001301408	-0.000074332		
5P3/2			1.842731535	0.002383648	-0.000255661		
5D3/2			1.702648448	0.001511384	-0.000145056		
5D5/2			1.629422988	0.002409312	-0.000714372		
5F5/2			1.102480042	0.000054947	-0.000005331		
5F7/2			1.060302679	0.000044722	-0.000014623		
6S1/2			0.948919035	0.000446749	-0.000041458		
6P1/2			0.852842850	0.000213008	-0.000012257		
6P3/2			0.711632339	0.000334374	-0.000036037		
7S1/2			0.304939416	0.000035894	-0.000003333		
3S1/2 -- (2)	613.395337	-1211.487166	6.621067204	0.022408583		-0.182783469	0.009294185
3P1/2			6.139917648	0.007589927	-0.000075152		
3P3/2			5.678622981	0.010680981	-0.001364320		
3D3/2			6.536529836	0.006689462	-0.000260145		
3D5/2			6.398629653	0.008408581	-0.000333660		
4S1/2			3.668069955	0.003853855	-0.001348617		
4P1/2			3.815801894	0.005586489	-0.000959186		
4P3/2			3.428903141	0.002732255	-0.000357738		
4D3/2			3.533552891	0.001939101	-0.000185954		
4D5/2			3.431610849	0.001944824	-0.000152772		
4F5/2			3.557936573	0.001975724	-0.000277777		
4F7/2			3.502264382	0.000893823	-0.000271397		
5S1/2			1.977252724	0.001029064	-0.000373587		
5P1/2			1.951741125	0.001477333	-0.000262030		
5P3/2			1.736189670	0.000722265	-0.000099694		
5D3/2			1.607299787	0.000437912	-0.000046138		
5D5/2			1.552244611	0.000398518	-0.000037835		
5F5/2			1.087342046	0.000179834	-0.000026355		
5F7/2			1.047243851	0.000082553	-0.000024740		
6S1/2			0.919103572	0.000202505	-0.000073998		
6P1/2			0.829267920	0.000243937	-0.000043517		
6P3/2			0.696737669	0.000102677	-0.000014313		
7S1/2			0.302546839	0.000016275	-0.000005953		
3P1/2 -- (2)	608.403727	-1204.896754	7.108481841	0.045065081		-0.039240235	0.002816742
3P3/2			6.254842621	0.004197305	-0.000085521		
3D3/2			6.412077416	0.015797865	-0.001475743		
3D5/2			6.739977603	0.006180966	-0.000067232		
4S1/2			3.804061224	0.003216133	-0.000381167		
4P1/2			3.753763163	0.005604894	-0.001269997		
4P3/2			3.494777487	0.001428979	-0.000089258		
4D3/2			3.561347959	0.004182812	-0.000598562		
4D5/2			3.477223502	0.001352437	-0.000044050		
4F5/2			3.550080445	0.003355856	-0.000742488		
4F7/2			3.536567941	0.000362156	-0.000078519		
5S1/2			2.098395035	0.000839247	-0.000107723		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
5P1/2			1.941117396	0.001387193	-0.000333875		
5P3/2			1.751140408	0.000365609	-0.000025517		
5D3/2			1.613471183	0.000964716	-0.000151616		
5D5/2			1.561266617	0.000269644	-0.000010684		
5F5/2			1.086791739	0.000310835	-0.000071031		
5F7/2			1.050412321	0.000036296	-0.000007395		
6S1/2			0.925038134	0.000164327	-0.000021448		
6P1/2			0.827676953	0.000226255	-0.000055047		
6P3/2			0.698803269	0.000051647	-0.000003679		
7S1/2			0.303021572	0.000013197	-0.000001727		
3P3/2 -- (4)	408.040101	-938.274449	5.933546236	0.019580052		-0.001481545	0.000274604
3D3/2			6.336148171	0.004363933	-0.000021738		
3D5/2			6.018029292	0.010654237	-0.000204017		
4S1/2			3.699421358	0.004961242	-0.000665553		
4P1/2			3.772232768	0.002157087	-0.000166097		
4P3/2			3.355264630	0.003465150	-0.000506568		
4D3/2			3.487226791	0.001845069	-0.000175353		
4D5/2			3.378197250	0.003838392	-0.000598254		
4F5/2			3.526645652	0.001697498	-0.000170428		
4F7/2			3.445376453	0.001640358	-0.000483548		
5S1/2			1.982138121	0.001194103	-0.000167750		
5P1/2			1.940941018	0.000522496	-0.000045328		
5P3/2			1.719708431	0.000838801	-0.000131816		
5D3/2			1.598070967	0.000401147	-0.000040297		
5D5/2			1.541713768	0.000802921	-0.000138344		
5F5/2			1.084437791	0.000147570	-0.000015426		
5F7/2			1.042379868	0.000141103	-0.000041603		
6S1/2			0.919926573	0.000230143	-0.000032663		
6P1/2			0.827503733	0.000084924	-0.000007541		
6P3/2			0.694466020	0.000117235	-0.000018656		
7S1/2			0.302611380	0.000018441	-0.000002621		
3D3/2 -- (4)	401.313546	-929.267287	6.943202329	0.033667370		-0.000033892	0.000008225
3D5/2			6.867458609	0.006019476	-0.000000745		
4S1/2			3.823379552	0.001733294	-0.000045838		
4P1/2			3.851909954	0.003632914	-0.000283968		
4P3/2			3.498754684	0.001165376	-0.000030144		
4D3/2			3.519898899	0.004102300	-0.000408362		
4D5/2			3.494969626	0.001334952	-0.000019820		
4F5/2			3.513494898	0.007622908	-0.001890546		
4F7/2			3.541434834	0.000260634	-0.000030619		
5S1/2			2.012397490	0.000445802	-0.000015590		
5P1/2			1.961110585	0.000829587	-0.000009209		
5P3/2			1.751760156	0.000285100	-0.0000309007		
5D3/2			1.606769605	0.000804859	-0.000088709		
5D5/2			1.564707282	0.000268581	-0.000004883		
5F5/2			1.083836515	0.000698523	-0.0000176718		
5F7/2			1.050981899	0.000026933	-0.000002920		
6S1/2			0.925776827	0.000087078	-0.000003228		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
305/2 -- (6)	366.438617	-878.550077				-0.000005485	0.000002037
6P1/2			0.830805000	0.000133262	-0.000011291		
6P3/2			0.698880570	0.000039933	-0.000001310		
7S1/2			0.373080365	0.000006991	-0.000000261		
4S1/2			6.669813287	0.027363121			
4P1/2			3.792170691	0.002006977	-0.000045894		
4P3/2			3.852981071	0.001447232	-0.000022852		
4D3/2			3.458128871	0.002250414	-0.0000399237		
4D5/2			3.570017363	0.001088575	-0.000022162		
4F5/2			3.417593811	0.003556984	-0.000255061		
4F7/2			3.581753652	0.001603273	-0.000117349		
5S1/2			3.464960514	0.004742070	-0.001319327		
5P1/2			2.004442623	0.000501387	-0.000015574		
5P3/2			1.959842004	0.000346673	-0.000007751		
5D3/2			1.742487872	0.000524128	-0.000026216		
5D5/2			1.614533677	0.000218935	-0.000005471		
5F5/2			1.550771118	0.000686293	-0.000054794		
5F7/2			1.089804186	0.000149019	-0.000010961		
6S1/2			1.044429100	0.000412794	-0.000116696		
6P1/2			0.924224002	0.000097360	-0.000003222		
6P3/2			0.830553340	0.000056222	-0.000001343		
6D3/2			0.697598195	0.000072720	-0.000003731		
6D5/2			0.302955710	0.000007810	-0.000000261		
4S1/2 -- (2)	213.618780	-520.318690	3.050948442	0.002201073		-0.050774629	0.002575065
4P1/2			2.726377677	0.000920986	-0.000037499		
4P3/2			2.561226015	0.001399490	-0.000295789		
4D3/2			2.758029716	0.000938572	-0.000088576		
4D5/2			2.706824587	0.000799104	-0.000101997		
4F5/2			2.851076162	0.000664083	-0.000054755		
4F7/2			2.826174765	0.000686985	-0.000056690		
5S1/2			1.768706535	0.000424290	-0.000185839		
5P1/2			1.761700661	0.000458683	-0.000089270		
5P3/2			1.582573630	0.000213644	-0.000047821		
5D3/2			1.476643649	0.000112122	-0.000013566		
5D5/2			1.430432571	0.000149766	-0.000013822		
5F5/2			1.031987177	0.000036476	-0.000002315		
5F7/2			0.996529004	0.000049190	-0.000002227		
6S1/2			0.880655153	0.000083373	-0.000037624		
6P1/2			0.799164902	0.000079308	-0.000015906		
6P3/2			0.675852894	0.000030864	-0.000006885		
6D3/2			0.299482540	0.000006696	-0.000000302		
4P1/2 -- (2)	207.387077	-510.429410	3.084334289	0.004138647		-0.010904482	0.000778502
4P3/2			2.743723041	0.000367670	-0.000014497		
4D3/2			2.603373813	0.002372452	-0.0000430169		
4D5/2			2.777294744	0.000471799	-0.000018021		
4F5/2			2.809651397	0.001088143	-0.000137761		
4F7/2			2.862559274	0.000500853	-0.000016670		
5S1/2			1.805991710	0.000459658	-0.000068357		
5P1/2			1.727617466	0.000543356	-0.000159684		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
5P3/2			1.597056561	0.000124907	-0.000012112		
5D3/2			1.469319759	0.000212580	-0.000036399		
5D5/2			1.436567633	0.000108527	-0.000004784		
5F5/2			1.031547814	0.000058468	-0.000004691		
5F7/2			0.998076347	0.000038845	-0.000000976		
6S1/2			0.886623337	0.000086487	-0.000013673		
6P1/2			0.794707253	0.000087640	-0.000026963		
6P3/2			0.677617516	0.000018933	-0.000001889		
7S1/2			0.299948986	0.000006907	-0.000001104		
4P3/2 -- (4)	145.027820	-418.560282	2.631325939	0.001847660		-0.000414505	0.000076392
4D3/2			2.647361460	0.000500071	-0.000013570		
4D5/2			2.497602185	0.001161032	-0.000093651		
4F5/2			2.704043186	0.000430247	-0.000016512		
4F7/2			2.649509824	0.000750758	-0.000049148		
5S1/2			1.762098770	0.000781045	-0.000121968		
5P1/2			1.732714399	0.000249930	-0.000023428		
5P3/2			1.547948720	0.000334785	-0.000062816		
5D3/2			1.455852748	0.000102307	-0.000009551		
5D5/2			1.407167397	0.000241502	-0.000024087		
5F5/2			1.021336972	0.000031104	-0.000001581		
5F7/2			0.985977831	0.000053410	-0.000003183		
6S1/2			0.878790084	0.000136144	-0.000022268		
6P1/2			0.794536870	0.000039227	-0.000004072		
6P3/2			0.671332411	0.000046188	-0.000009153		
7S1/2			0.299326347	0.000010777	-0.000001773		
4D3/2 -- (4)	135.553056	-401.834206	2.682807740	0.002578225		-0.000010878	0.000002626
4D5/2			2.664959815	0.000460744	-0.000000125		
4F5/2			2.608415707	0.001313501	-0.000127785		
4F7/2			2.726977752	0.000416710	-0.000002633		
5S1/2			1.777935805	0.000235739	-0.000009639		
5P1/2			1.725182035	0.000573107	-0.000066782		
5P3/2			1.574194426	0.000130704	-0.000005813		
5D3/2			1.438095530	0.000325723	-0.000041523		
5D5/2			1.417710907	0.000099061	-0.000002158		
5F5/2			1.020860899	0.000099592	-0.000010683		
5F7/2			0.988902156	0.000030266	-0.000000512		
6S1/2			0.881456045	0.000043221	-0.000002271		
6P1/2			0.793964280	0.000082480	-0.000010094		
6P3/2			0.674489315	0.000017845	-0.000000895		
7S1/2			0.299536088	0.000003444	-0.000000187		
4D5/2 -- (6)	124.750246	-383.910414	2.604018857	0.002101930		-0.000001763	0.000000652
4F5/2			2.693599281	0.000363077	-0.000006297		
4F7/2			2.583168355	0.001108749	-0.000076191		
5S1/2			1.764700114	0.000273806	-0.000009401		
5P1/2			1.730458463	0.000166784	-0.000004028		
5P3/2			1.558686035	0.000290910	-0.000022846		
5D3/2			1.454368362	0.000085810	-0.000002532		
5D5/2			1.395354921	0.000278392	-0.000025748		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97 A=247 R=1.42282E-04 A.U.					
5F5/2			1.020206489	0.000026903	-0.000001196		
5F7/2			0.983850237	0.000085145	-0.000008004		
6S1/2			0.879135690	0.000048464	-0.000002253		
6P1/2			0.794196776	0.000025474	-0.000000835		
6P3/2			0.672545970	0.000037854	-0.000003137		
7S1/2			0.299351807	0.000003848	-0.000000185		
4F5/2 -- (6)	111.085720	-360.053092	2.757498670	0.002712692		-0.000000006	0.000000002
4F7/2			2.782373318	0.000436691	-0.000000003		
5S1/2			1.785780363	0.000142601	-0.000000173		
5P1/2			1.737147303	0.000201040	-0.000001270		
5P3/2			1.578447426	0.000091912	-0.000000442		
5D3/2			1.455182271	0.000192331	-0.000007667		
5D5/2			1.420050296	0.000064960	-0.000000619		
5F5/2			1.016917284	0.000140442	-0.000007157		
5F7/2			0.992373196	0.000034082	-0.000000204		
6S1/2			0.882897419	0.000026754	-0.000000213		
6P1/2			0.795708495	0.000030359	-0.000000467		
6P3/2			0.675076945	0.000012551	-0.000000111		
7S1/2			0.299649877	0.000002137	-0.000000019		
4F7/2 -- (8)	107.406375	-353.347451	2.725563134	0.002475540		-0.000000001	0.000000001
5S1/2			1.779695873	0.000173493	-0.000000138		
5P1/2			1.741488189	0.000125376	-0.000000175		
5P3/2			1.570601340	0.000151113	-0.000001024		
5D3/2			1.461033904	0.000072227	-0.000000338		
5D5/2			1.410543084	0.000165183	-0.000004897		
5F5/2			1.025652372	0.000030063	-0.000000226		
5F7/2			0.983391991	0.000126265	-0.000004958		
6S1/2			0.881808209	0.000030889	-0.000000207		
6P1/2			0.795930633	0.000018899	-0.000000103		
6P3/2			0.674123961	0.000019794	-0.000000232		
7S1/2			0.299563155	0.000002455	-0.000000019		
5S1/2 -- (2)	69.474980	-235.124354	1.489835742	0.000232489		-0.013733927	0.000696029
5P1/2			1.297195836	0.000145928	-0.000013148		
5P3/2			1.224125286	0.000216092	-0.000056221		
5D3/2			1.230528995	0.000143119	-0.000018557		
5D5/2			1.204415327	0.000078579	-0.000019291		
5F5/2			0.935393435	0.000049432	-0.000006298		
5F7/2			0.907286267	0.000024805	-0.000005884		
6S1/2			0.810610152	0.000035838	-0.000017898		
6P1/2			0.748121636	0.000022885	-0.000005182		
6P3/2			0.639857081	0.000013629	-0.000004627		
7S1/2			0.294103447	0.000002886	-0.000001472		
5P1/2 -- (2)	64.306788	-224.492546	1.443160449	0.000400619		-0.002808487	0.000200220
5P3/2			1.282382308	0.000035423	-0.000002014		
5D3/2			1.146165254	0.0000373573	-0.0000084164		
5D5/2			1.212184561	0.000031429	-0.000003253		
5F5/2			0.916683335	0.000081048	-0.000016398		
5F7/2			0.905855710	0.000013067	-0.000001753		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
BERKELIUM	5F9	Z=97	A=247	R=1.42282E-04	A.U.		
6S1/2			0.818300396	0.000053139	-0.000008544		
6P1/2			0.735177683	0.000035417	-0.000012119		
6P3/2			0.641728738	0.000006764	-0.000000805		
7S1/2			0.294611740	0.000004098	-0.000000682		
5P3/2 -- (4)	45.371765	-189.473186	1.231372554	0.000178685		-0.000105081	0.000019337
5D3/2			1.167161234	0.000067509	-0.000004373		
5D5/2			1.096509547	0.000131750	-0.000025032		
5F5/2			0.903491977	0.000035116	-0.000003113		
5F7/2			0.867952033	0.000037379	-0.000008490		
6S1/2			0.799723124	0.000089881	-0.000014456		
6P1/2			0.735776925	0.000018969	-0.000001905		
6P3/2			0.628789028	0.000018722	-0.000003946		
7S1/2			0.293267489	0.000006580	-0.000001097		
5D3/2 -- (4)	36.732375	-168.062935	1.119260211	0.000191708		-0.000002420	0.000000584
5D5/2			1.111034346	0.000034381	-0.000000013		
5F5/2			0.837330954	0.000115976	-0.000025055		
5F7/2			0.808586756	0.000012388	-0.000006435		
6S1/2			0.786770390	0.000022533	-0.000000782		
6P1/2			0.715553320	0.000053952	-0.000006497		
6P3/2			0.626914938	0.000008976	-0.000000501		
7S1/2			0.292364784	0.000001692	-0.000000080		
5D5/2 -- (6)	33.594886	-160.923197	1.084654006	0.000154337		-0.000000388	0.000000143
5F5/2			0.870627578	0.000026035	-0.000001420		
5F7/2			0.817822576	0.000073067	-0.000015637		
6S1/2			0.779635916	0.000027988	-0.000000663		
6P1/2			0.720183105	0.000013304	-0.000000285		
6P3/2			0.621209805	0.000021989	-0.000002188		
7S1/2			0.291889080	0.000001971	-0.000000073		
5F5/2 -- (6)	16.093076	-106.999726	0.724718687	0.000063284		-0.000000001	0.000000000
5F7/2			0.720545350	0.000039616	-0.000000000		
6S1/2			0.682328190	0.000009338	-0.000000355		
6P1/2			0.628268470	0.000011710	-0.000000415		
6P3/2			0.568978379	0.000004052	-0.000000031		
7S1/2			0.284583272	0.000000682	-0.000000000		
5F7/2 -- (3)	14.962296	-102.912557	0.697375801	0.000053953		-0.000000000	0.000000000
6S1/2			0.669572874	0.000011520	-0.000000385		
6P1/2			0.631046080	0.000007116	-0.000000055		
6P3/2			0.556047920	0.000007908	-0.000000110		
7S1/2			0.283270862	0.000000849	-0.000000000		
6S1/2 -- (2)	16.060410	-97.664469	0.673901764	0.00017961		-0.0002713092	0.000137474
6P1/2			0.562184463	0.000018856	-0.000002519		
6P3/2			0.515446507	0.000019907	-0.000003526		
7S1/2			0.279893165	0.000001058	-0.000000567		
6P1/2 -- (2)	12.575626	-86.194329	0.602612740	0.000024584		-0.000462221	0.000032941
6P3/2			0.519907115	0.000002008	-0.000000113		
7S1/2			0.279363797	0.000002175	-0.000000331		
6P3/2 -- (4)	7.793802	-70.535876	0.488967171	0.000009407		-0.000014831	0.000002728
7S1/2			0.272065733	0.000003135	-0.000000436		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
BERKELIUM 5F9 Z=97 A=247 R=1.42282E-04 A.U.								
7S1/2 -- (2)	1.486172	-30.030937	0.222274486	0.000000535		-0.000218178	0.000011055	
ETOT	-32148.68507	40559.69300	-84148.81785	11405.75289	51.091557988	-5.356337708	-11.697516624	0.649180728
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.								
1S1/2 -- (2)	7838.218415	-13477.136847	77.810663067	14.917725498		-4.904877117	0.275954740	
2S1/2			24.677414897	0.856024895	-0.106458336			
2P1/2			31.176310095	1.759675735	-0.207841919			
2P3/2			23.390344496	0.700090139	-0.202115810			
3S1/2			10.308772255	0.191005860	-0.025333018			
3P1/2			11.663301304	0.355662280	-0.040838152			
3P3/2			9.515689151	0.164297781	-0.048871360			
3D3/2			9.701516712	0.007047445	-0.000756857			
3D5/2			9.163414035	0.002747362	-0.000877926			
4S1/2			4.801696356	0.052388291	-0.007047665			
4P1/2			5.096048111	0.093068987	-0.010616975			
4P3/2			4.304440004	0.043919221	-0.013155681			
4D3/2			4.208452462	0.002162401	-0.000233004			
4D5/2			4.018027705	0.000845981	-0.000272947			
4F5/2			3.777311309	0.000007142	-0.000000700			
4F7/2			3.705651413	0.000002783	-0.000000914			
5S1/2			2.297677700	0.014234388	-0.001922193			
5P1/2			2.299673015	0.023823216	-0.002713064			
5P3/2			1.972060234	0.011097732	-0.003330248			
5D3/2			1.771096706	0.000482394	-0.000052019			
5D5/2			1.694380806	0.000186389	-0.000060270			
5F5/2			1.144913898	0.000000889	-0.000000087			
5F7/2			1.101619284	0.000000330	-0.000000109			
6S1/2			0.992844994	0.002807872	-0.000379532			
6P1/2			0.896984977	0.003900412	-0.000444017			
6P3/2			0.735298690	0.001543852	-0.000463467			
7S1/2			0.310492270	0.000220475	-0.000029805			
2S1/2 -- (2)	1997.127010	-3461.257295	17.822360250	0.357017261		-0.824742220	0.043111996	
2P1/2			17.968438859	0.109504400	-0.000105844			
2P3/2			15.835937487	0.141043519	-0.007201709			
3S1/2			8.410368081	0.043325803	-0.010308912			
3P1/2			9.328136531	0.075403201	-0.011445747			
3P3/2			8.190118798	0.039249400	-0.004139461			
3D3/2			9.124116514	0.038951550	-0.005283645			
3D5/2			8.712934924	0.016276318	-0.005183434			
4S1/2			4.300266396	0.011778920	-0.002957774			
4P1/2			4.488367528	0.020445124	-0.003188602			
4P3/2			3.960642180	0.010913396	-0.001314975			
4D3/2			4.057748763	0.008707578	-0.001247416			

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
4D5/2			3.900954354	0.003847527	-0.001257748		
4F5/2			3.772319178	0.000574896	-0.000074579		
4F7/2			3.701374982	0.000203946	-0.000072620		
5S1/2			2.162567992	0.003191902	-0.000810670		
5P1/2			2.144238629	0.005268106	-0.000826238		
5P3/2			1.885775655	0.002778859	-0.000344629		
5D3/2			1.738605041	0.001811687	-0.000262796		
5D5/2			1.669500485	0.000801701	-0.000263005		
5F5/2			1.144314151	0.000068283	-0.000008928		
5F7/2			1.101129724	0.000023145	-0.000008306		
6S1/2			0.966246497	0.000629202	-0.000160233		
6P1/2			0.871540211	0.000863727	-0.000135633		
6P3/2			0.723312435	0.000387178	-0.000048308		
7S1/2			0.308404367	0.000049400	-0.000012585		
2P1/2 -- (2)	2002.315494	-3467.952566	22.480212188	0.825211466		-0.162531217	0.012111644
2P3/2			18.660780859	0.083049358	-0.000505686		
3S1/2			9.024073214	0.029616386	-0.001960699		
3P1/2			9.335562805	0.070226330	-0.010109713		
3P3/2			8.579617326	0.021316689	-0.000563110		
3D3/2			9.154817671	0.112534998	-0.026766212		
3D5/2			8.941724659	0.003084951	-0.000768653		
4S1/2			4.452851169	0.008041397	-0.000596750		
4P1/2			4.506009718	0.017841733	-0.002825430		
4P3/2			4.059315796	0.005715983	-0.000177598		
4D3/2			4.068924808	0.026885745	-0.006583629		
4D5/2			3.957848877	0.000863287	-0.000203455		
4F5/2			3.773582833	0.000647865	-0.000135561		
4F7/2			3.703802773	0.000034936	-0.000013432		
5S1/2			2.203081328	0.002178308	-0.000166057		
5P1/2			2.149624763	0.004534399	-0.000733259		
5P3/2			1.910408335	0.001444637	-0.000046565		
5D3/2			1.741160812	0.005680457	-0.001399912		
5D5/2			1.681473793	0.000186800	-0.000043409		
5F5/2			1.144466661	0.000077357	-0.000016290		
5F7/2			1.101406536	0.000004007	-0.000001545		
6S1/2			0.974193463	0.000429358	-0.000032946		
6P1/2			0.872453712	0.000741174	-0.000120416		
6P3/2			0.726730429	0.000200973	-0.000006528		
7S1/2			0.309027845	0.000033709	-0.000002589		
2P3/2 -- (4)	1167.117303	-2403.432269	16.944520314	0.315746190		-0.005458439	0.001057447
3S1/2			8.628379568	0.035900642	-0.003102511		
3P1/2			9.314627296	0.021532511	-0.001034882		
3P3/2			8.043249540	0.040087209	-0.003783864		
3D3/2			9.157477841	0.034080428	-0.003236095		
3D5/2			8.982513404	0.055523389	-0.015794553		
4S1/2			4.347584520	0.009039381	-0.000827791		
4P1/2			4.483743526	0.005425887	-0.000300235		
4P3/2			3.928019137	0.010069599	-0.001956649		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
4D3/2			4.066930951	0.007655330	-0.000731548		
4D5/2			3.874588266	0.012372943	-0.003644601		
4F5/2			3.771772168	0.000516308	-0.000049702		
4F7/2			3.699424048	0.000440603	-0.000142933		
5S1/2			2.174663741	0.002406613	-0.000223903		
5P1/2			2.142975280	0.001377856	-0.000078826		
5P3/2			1.877890667	0.002505593	-0.000269106		
5D3/2			1.740580804	0.001598719	-0.000153082		
5D5/2			1.664187294	0.002546514	-0.000755266		
5F5/2			1.144252554	0.000060863	-0.000005900		
5F7/2			1.100914115	0.000049534	-0.000016203		
6S1/2			0.968596419	0.000472369	-0.000044123		
6P1/2			0.871330310	0.000225189	-0.000012980		
6P3/2			0.722225911	0.000347410	-0.000037495		
7S1/2			0.308588464	0.000037063	-0.000003464		
3S1/2 -- (2)	636.723656	-1249.943278	6.728931302	0.023514437		-0.196584143	0.010167038
3P1/2			6.243356291	0.007958080	-0.000076659		
3P3/2			5.761609196	0.011188549	-0.001472968		
3D3/2			6.634220569	0.006994940	-0.000276962		
3D5/2			6.490640623	0.008751789	-0.000356130		
4S1/2			3.730307863	0.004056380	-0.001417396		
4P1/2			3.883555798	0.005905380	-0.001012625		
4P3/2			3.480672805	0.002814877	-0.000372080		
4D3/2			3.591068205	0.002019324	-0.000193267		
4D5/2			3.485598077	0.002033174	-0.000158272		
4F5/2			3.620524971	0.002076261	-0.000291934		
4F7/2			3.562850607	0.000937863	-0.000285167		
5S1/2			2.017292332	0.001092796	-0.000396191		
5P1/2			1.993975302	0.001577821	-0.000279524		
5P3/2			1.768740274	0.000751688	-0.000104492		
5D3/2			1.642313141	0.000463123	-0.000348749		
5D5/2			1.584921835	0.000422473	-0.000039815		
5F5/2			1.128117541	0.000197510	-0.000028970		
5F7/2			1.087011011	0.000090715	-0.000027224		
6S1/2			0.937971398	0.000214965	-0.000078450		
6P1/2			0.847087603	0.000260166	-0.000046360		
6P3/2			0.707143493	0.000105645	-0.000014826		
7S1/2			0.306188485	0.000016872	-0.000006163		
3P1/2 -- (2)	631.923596	-1243.603234	7.230211132	0.047338802		-0.043481779	0.003166906
3P3/2			6.347330140	0.004323600	-0.000093739		
3D3/2			6.538800608	0.016594489	-0.001583349		
3D5/2			6.838574504	0.006421258	-0.000072173		
4S1/2			3.869894770	0.003379923	-0.000399569		
4P1/2			3.820421624	0.005912401	-0.001336860		
4P3/2			3.548431253	0.001478356	-0.000093485		
4D3/2			3.619680795	0.004328721	-0.000616264		
4D5/2			3.532453579	0.001418446	-0.000045935		
4F5/2			3.612802393	0.003525287	-0.000780170		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM	5F10	Z=98	A=251 R=1.43046E-04 A.U.				
4F7/2			3.597967410	0.000379031	-0.000082459		
5S1/2			2.049544007	0.000890029	-0.000114010		
5P1/2			1.983102841	0.001478546	-0.000355205		
5P3/2			1.784263469	0.000382292	-0.000026981		
5D3/2			1.648765395	0.001014281	-0.000158849		
5D5/2			1.594308839	0.000286768	-0.000011303		
5F5/2			1.127562465	0.000341460	-0.000078095		
5F7/2			1.090408330	0.000039842	-0.000038139		
6S1/2			0.944114002	0.000174206	-0.000022696		
6P1/2			0.845464996	0.000240803	-0.000058485		
6P3/2			0.709263116	0.000053390	-0.000003845		
7S1/2			0.306668359	0.000013663	-0.000001784		
3P3/2 -- (4)	418.857341	-960.813768	6.010230908	0.020329000		-0.001584466	0.000299988
3D3/2			6.419583627	0.004528794	-0.000022146		
3D5/2			6.094659924	0.011048733	-0.000211815		
4S1/2			3.759812680	0.005245010	-0.0000706195		
4P1/2			3.836060281	0.002277286	-0.000175456		
4P3/2			3.404012198	0.003616711	-0.0000529256		
4D3/2			3.541630623	0.001935835	-0.000184069		
4D5/2			3.429181250	0.004011956	-0.0000626014		
4F5/2			3.586953863	0.001782528	-0.000178910		
4F7/2			3.503209388	0.001722813	-0.0000507699		
5S1/2			2.021694669	0.001270343	-0.000179138		
5P1/2			1.982116876	0.000556248	-0.000048327		
5P3/2			1.751386498	0.000883876	-0.000139086		
5D3/2			1.632321727	0.000426805	-0.000042903		
5D5/2			1.573642349	0.000850668	-0.000146865		
5F5/2			1.124859004	0.000161510	-0.000016895		
5F7/2			1.081676251	0.000154801	-0.000045617		
6S1/2			0.938695283	0.000244595	-0.000034849		
6P1/2			0.845154417	0.000090246	-0.000008028		
6P3/2			0.704778594	0.000122100	-0.0000019458		
7S1/2			0.306243706	0.000019139	-0.000002731		
3D3/2 -- (4)	412.042777	-951.719030	7.036939852	0.034978275		-0.000037229	0.000009235
3D5/2			6.956594224	0.006240779	-0.000000809		
4S1/2			3.886945044	0.001817153	-0.000048156		
4P1/2			3.918072781	0.003826291	-0.0000301045		
4P3/2			3.550452417	0.001215993	-0.000031480		
4D3/2			3.575411066	0.004289256	-0.0000427845		
4D5/2			3.548593833	0.001394490	-0.000020736		
4F5/2			3.573913615	0.008012566	-0.001987424		
4F7/2			3.601904169	0.000274083	-0.000032184		
5S1/2			2.052969512	0.000471233	-0.000016545		
5P1/2			2.003082823	0.000881183	-0.000073979		
5P3/2			1.784401300	0.000300386	-0.000009511		
5D3/2			1.641428949	0.000852917	-0.0000094271		
5D5/2			1.597467975	0.000284336	-0.000005187		
5F5/2			1.124272425	0.000766595	-0.000194051		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
5F7/2			1.090918255	0.000029711	-0.000003215		
6S1/2			0.944737877	0.000091995	-0.000003426		
6P1/2			0.848580738	0.000141281	-0.000012048		
6P3/2			0.709272533	0.000041587	-0.000001368		
7S1/2			0.306716757	0.000007213	-0.000000271		
3D5/2 -- (6)	375.492100	-898.630001	6.753118264	0.028368157		-0.000005972	0.000002270
4S1/2			3.854294464	0.002102030	-0.000048187		
4P1/2			3.918347548	0.001516987	-0.000023984		
4P3/2			3.508486466	0.002345605	-0.000103695		
4D3/2			3.625809304	0.001137026	-0.000023225		
4D5/2			3.469137553	0.003711501	-0.000266824		
4F5/2			3.643481820	0.001685729	-0.000123262		
4F7/2			3.523229451	0.004982733	-0.001386336		
5S1/2			2.044576954	0.000529217	-0.000016522		
5P1/2			2.001551350	0.000366823	-0.000008243		
5P3/2			1.774725273	0.000551339	-0.000027667		
5D3/2			1.649287845	0.000231836	-0.000005822		
5D5/2			1.582969104	0.000725315	-0.000058107		
5F5/2			1.130613208	0.000163595	-0.000012022		
5F7/2			1.083873791	0.000453173	-0.000128162		
6S1/2			0.943100396	0.000102696	-0.000003419		
6P1/2			0.848284481	0.000059392	-0.000001428		
6P3/2			0.707949737	0.000075600	-0.000003892		
7S1/2			0.306588384	0.000008045	-0.000000270		
4S1/2 -- (2)	222.252655	-536.829845	3.103100234	0.002320921		-0.054819249	0.002827686
4P1/2			2.774291242	0.000966417	-0.000038529		
4P3/2			2.602466399	0.001487345	-0.000318766		
4D3/2			2.803735405	0.000989025	-0.000093804		
4D5/2			2.750707332	0.000836891	-0.000108238		
4F5/2			2.901511943	0.000698477	-0.000057544		
4F7/2			2.875752116	0.000722932	-0.000059642		
5S1/2			1.803384155	0.000451564	-0.000197774		
5P1/2			1.798406095	0.000492982	-0.000095819		
5P3/2			1.611506563	0.000224351	-0.000051263		
5D3/2			1.507734759	0.000119345	-0.000014527		
5D5/2			1.459651611	0.000158676	-0.000014829		
5F5/2			1.069319514	0.000040202	-0.000002559		
5F7/2			1.033135960	0.000054142	-0.000002460		
6S1/2			0.898560331	0.000088686	-0.000040016		
6P1/2			0.816157840	0.000085093	-0.000017044		
6P3/2			0.686015112	0.000031969	-0.000007271		
7S1/2			0.303120893	0.000006956	-0.000003149		
4P1/2 -- (2)	215.979349	-526.916728	3.139429796	0.004371066		-0.012136620	0.000879039
4P3/2			2.788316173	0.000382200	-0.000016024		
4D3/2			2.647600792	0.002514737	-0.000459099		
4D5/2			2.823116828	0.000491824	-0.000019266		
4F5/2			2.860282577	0.001146195	-0.000145216		
4F7/2			2.913736435	0.000527394	-0.000017597		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM	5F10	Z=98 A=251 R=1.43046E-04 A.U.					
			1.841883606	0.000487354	-0.000072475		
			1.763570377	0.000580340	-0.000170582		
			1.626594839	0.000130595	-0.000012906		
			1.530304915	0.000226098	-0.000039167		
			1.466117581	0.000114873	-0.000005135		
			1.068936859	0.000064461	-0.000005192		
			1.034839942	0.000042775	-0.000001083		
			0.904719652	0.000091665	-0.000014497		
			0.811621766	0.000093459	-0.000028757		
			0.687834292	0.000018646	-0.000001988		
			0.303591120	0.000007150	-0.000001140		
4P3/2 -- (4)	149.590628	-429.544360	2.670284081	0.001932680		-0.000445804	0.000083912
4D3/2			2.688288276	0.000521603	-0.000013914		
4D5/2			2.535537022	0.001213400	-0.000097229		
4F5/2			2.748429878	0.000449710	-0.000016997		
4F7/2			2.692825435	0.000786770	-0.000050690		
5S1/2			1.795642555	0.000837001	-0.000130858		
5P1/2			1.767665294	0.000268494	-0.000025157		
5P3/2			1.575599373	0.000354000	-0.000066606		
5D3/2			1.485826802	0.000109663	-0.0000310287		
5D5/2			1.435311431	0.000257523	-0.000025852		
5F5/2			1.057745339	0.000034608	-0.000001787		
5F7/2			1.021688141	0.000058863	-0.000003609		
6S1/2			0.896479631	0.000145457	-0.000023830		
6P1/2			0.811266907	0.000041983	-0.000004360		
6P3/2			0.681379029	0.000048269	-0.000009590		
7S1/2			0.302951493	0.000011242	-0.000001853		
4D3/2 -- (4)	140.016858	-412.732164	2.726096939	0.002704127		-0.000012045	0.000002972
4D5/2			2.707089505	0.000481943	-0.000000137		
4F5/2			2.653452447	0.001373857	-0.0000131958		
4F7/2			2.773387570	0.000438228	-0.000002732		
5S1/2			1.812481436	0.000250386	-0.000010282		
5P1/2			1.760410373	0.000612904	-0.000071679		
5P3/2			1.602807680	0.000138016	-0.000006154		
5D3/2			1.467899615	0.000346665	-0.000004444		
5D5/2			1.446403646	0.000105187	-0.000002308		
5F5/2			1.057407801	0.000111387	-0.000012222		
5F7/2			1.024913942	0.000033192	-0.000000574		
6S1/2			0.899307327	0.000045846	-0.000002423		
6P1/2			0.810760010	0.000087899	-0.000010802		
6P3/2			0.684616322	0.000018628	-0.000000937		
7S1/2			0.303168772	0.000003567	-0.000000194		
4D5/2 -- (6)	128.663667	-393.958325	2.644406059	0.002200971		-0.000001936	0.000000733
4F5/2			2.738813277	0.000379811	-0.000006441		
4F7/2			2.626513458	0.001160359	-0.000078209		
5S1/2			1.798638291	0.000290662	-0.000010016		
5P1/2			1.765604356	0.000177529	-0.000004302		
5P3/2			1.586788699	0.000306182	-0.000024185		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
5D3/2			1.484448206	0.000091255	-0.000002715		
5D5/2			1.423313741	0.000295564	-0.000027512		
5F5/2			1.056610586	0.000029932	-0.000001360		
5F7/2			1.019495841	0.000094795	-0.000009184		
6S1/2			0.896883279	0.000051348	-0.000002402		
6P1/2			0.810955564	0.000027036	-0.000000893		
6P3/2			0.682630627	0.000039495	-0.000003282		
7S1/2			0.302980756	0.000003981	-0.000000193		
4F5/2 -- (6)	114.953357	-370.177380	2.838094046	0.002858737		-0.000000007	0.000000003
4F7/2			2.833087088	0.000460358	-0.000000004		
5S1/2			1.821386727	0.000151339	-0.000000197		
5P1/2			1.773590843	0.000213910	-0.000001395		
5P3/2			1.607751434	0.000097235	-0.000000482		
5D3/2			1.486011030	0.000204467	-0.000008203		
5D5/2			1.449264693	0.000069059	-0.000000665		
5F5/2			1.053493305	0.000154265	-0.000007992		
5F7/2			1.028828177	0.000037565	-0.000000229		
6S1/2			0.900927913	0.000028372	-0.000000231		
6P1/2			0.812664819	0.000032233	-0.000000505		
6P3/2			0.685285603	0.000013124	-0.000000118		
7S1/2			0.303293743	0.000002213	-0.000000020		
4F7/2 -- (8)	111.081787	-363.154525	2.774819173	0.002607234		-0.000000001	0.000000001
5S1/2			1.815053984	0.000183913	-0.000000158		
5P1/2			1.777879082	0.000133259	-0.000000193		
5P3/2			1.599699719	0.000159595	-0.000001117		
5D3/2			1.491883522	0.000076815	-0.000000366		
5D5/2			1.439488792	0.000175241	-0.000005223		
5F5/2			1.062670909	0.000033068	-0.000000254		
5F7/2			1.019300387	0.000138695	-0.000005540		
6S1/2			0.899793835	0.000032722	-0.000000224		
6P1/2			0.812869957	0.000020051	-0.000000112		
6P3/2			0.684315728	0.000020670	-0.000000247		
7S1/2			0.303205558	0.000002540	-0.000000020		
5S1/2 -- (2)	72.860140	-243.216846	1.519775111	0.000247988		-0.014962997	0.000771262
5P1/2			1.324193423	0.000153881	-0.000013671		
5P3/2			1.247978756	0.000233423	-0.000060900		
5D3/2			1.256273306	0.000152689	-0.000019790		
5D5/2			1.229115698	0.000083804	-0.000020596		
5F5/2			0.967042068	0.000054285	-0.000006913		
5F7/2			0.938589771	0.000027396	-0.000006471		
6S1/2			0.827246313	0.000038278	-0.000019120		
6P1/2			0.764125621	0.000024720	-0.000005582		
6P3/2			0.649858833	0.000014504	-0.000004954		
7S1/2			0.297770549	0.000003010	-0.000001535		
5P1/2 -- (2)	67.591684	-232.489486	1.473985793	0.000428807		-0.003159392	0.000228494
5P3/2			1.307781352	0.000037474	-0.000002264		
5D3/2			1.170894825	0.000400974	-0.0000390388		
5D5/2			1.237546627	0.000033401	-0.000003499		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM 5F10 Z=98 A=251 R=1.43046E-04 A.U.							
5F5/2			0.947588320	0.000088978	-0.000017987		
5F7/2			0.937317869	0.000014489	-0.000001928		
6S1/2			0.835249583	0.000056395	-0.000009074		
6P1/2			0.751007206	0.000037946	-0.000012991		
6P3/2			0.651835940	0.000007013	-0.000000852		
7S1/2			0.298289585	0.000004251	-0.000000708		
5P3/2 -- (4)	47.237868	-195.219972	1.253969927	0.000189318		-0.000114157	0.000021454
5D3/2			1.190488162	0.000071088	-0.000004551		
5D5/2			1.118002689	0.000139341	-0.000026276		
5F5/2			0.932844748	0.000038162	-0.000003364		
5F7/2			0.896568931	0.000040985	-0.000009199		
6S1/2			0.815777815	0.000096730	-0.000015546		
6P1/2			0.751247311	0.000020529	-0.000002057		
6P3/2			0.638612319	0.000019651	-0.000004145		
7S1/2			0.296913614	0.000006915	-0.000001152		
5D3/2 -- (4)	38.437565	-173.635579	1.143168036	0.000204780		-0.000002721	0.000000671
5D5/2			1.134329622	0.000036257	-0.000000015		
5F5/2			0.864291060	0.000125618	-0.000026977		
5F7/2			0.887409149	0.000013758	-0.000000471		
6S1/2			0.803121331	0.000024090	-0.000000843		
6P1/2			0.730931641	0.000057940	-0.000006991		
6P3/2			0.636973594	0.000009406	-0.000000526		
7S1/2			0.296051130	0.000001767	-0.000000084		
5D5/2 -- (6)	35.087770	-166.091645	1.107016765	0.000164480		-0.000000432	0.000000163
5F5/2			0.898794876	0.000028220	-0.000001519		
5F7/2			0.844496421	0.000079360	-0.000016792		
6S1/2			0.795693116	0.000029894	-0.000000713		
6P1/2			0.735563016	0.000014250	-0.000000306		
6P3/2			0.631188956	0.000023054	-0.000002297		
7S1/2			0.295566997	0.000002057	-0.000000076		
5F5/2 -- (6)	17.303500	-112.201671	0.753098421	0.000070739		-0.000000061	0.000000000
5F7/2			0.749135591	0.000010771	-0.000000000		
6S1/2			0.701680519	0.000010069	-0.000000360		
6P1/2			0.646128268	0.000012654	-0.000000412		
6P3/2			0.581666219	0.000004311	-0.000000028		
7S1/2			0.288749982	0.000000721	-0.000000000		
5F7/2 -- (4)	16.093757	-107.958771	0.725362052	0.000060381		-0.000000000	0.000000000
6S1/2			0.689061451	0.000012542	-0.000000394		
6P1/2			0.649200676	0.000007751	-0.000000055		
6P3/2			0.569037825	0.000008438	-0.000000102		
7S1/2			0.287531098	0.000000896	-0.000000000		
6S1/2 -- (2)	16.825450	-100.860257	0.687709640	0.000019128		-0.000295506	0.000152287
6P1/2			0.573962377	0.000019883	-0.000002645		
6P3/2			0.524492830	0.000021272	-0.000005899		
7S1/2			0.283589851	0.000001098	-0.0000000524		
6P1/2 -- (2)	13.190869	-89.073599	0.615507076	0.000026238		-0.000519291	0.000037543
6P3/2			0.529158611	0.000002104	-0.000000125		
7S1/2			0.283088318	0.000002245	-0.000000341		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
CALIFORNIUM	5F10	Z=98 A=251 R=1.43046E-04 A.U.					
6P3/2 -- (4)	8.023465	-72.331973	0.496341821	0.000009834		-0.000015927	0.000002992
7S1/2			0.275471117	0.000003262	-0.000000450		
7S1/2 -- (2)	1.519027	-30.707912	0.224899569	0.000000554		-0.000232068	0.000011959
ETOT	-33023.38839	41940.38160	-86701.11765	11701.59294	53.078679338	-5.555987829	-12.472735449
							0.704774902

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
1S1/2 -- (2)	8110.991619	-13889.946826	79.155199679	15.461694081		-5.213180715	0.298512866
2S1/2			25.129208428	0.890989524	-0.111017088		
2P1/2			31.824583135	1.830448543	-0.214221846		
2P3/2			23.678333960	0.721507525	-0.208275596		
3S1/2			10.493178030	0.198981744	-0.026432772		
3P1/2			11.891656777	0.369784701	-0.042008644		
3P3/2			9.644622484	0.170066040	-0.050578210		
3D3/2			9.833331195	0.007254452	-0.000773725		
3D5/2			9.275986815	0.002825346	-0.000902475		
4S1/2			4.891107085	0.054763632	-0.007378543		
4P1/2			5.198927227	0.097114030	-0.010956683		
4P3/2			4.371532619	0.045704920	-0.013688200		
4D3/2			4.277549691	0.002242897	-0.000240000		
4D5/2			4.080193543	0.000876997	-0.030282875		
4F5/2			3.842572471	0.000007454	-0.000000725		
4F7/2			3.768309635	0.000002909	-0.000000955		
5S1/2			2.347382565	0.015006568	-0.002029599		
5P1/2			2.354002696	0.025103999	-0.002827203		
5P3/2			2.010094593	0.011656186	-0.003497275		
5D3/2			1.809965960	0.000507320	-0.000054327		
5D5/2			1.729774926	0.000195807	-0.000063300		
5F5/2			1.185170176	0.000000969	-0.000000094		
5F7/2			1.140395672	0.000000361	-0.000000119		
6S1/2			1.013511972	0.002958273	-0.000400483		
6P1/2			0.916648368	0.004103272	-0.000461914		
6P3/2			0.745776049	0.0061601871	-0.000480810		
7S1/2			0.314303098	0.000226763	-0.000030703		
2S1/2 -- (2)	2074.669004	-3576.897610	18.131247142	0.374030354		-0.885388234	0.047066405
2P1/2			18.300441390	0.114786140	-0.000107116		
2P3/2			16.063450898	0.146554292	-0.007807012		
3S1/2			8.550046367	0.045415022	-0.010787278		
3P1/2			9.492445188	0.079188835	-0.011997263		
3P3/2			8.302758844	0.040375381	-0.004218828		
3D3/2			9.251374707	0.040405523	-0.005475074		
3D5/2			8.824649508	0.016838120	-0.005369023		
4S1/2			4.375887095	0.012389268	-0.003106152		
4P1/2			4.571890714	0.021547670	-0.003353518		
4P3/2			4.021701757	0.011294838	-0.001350155		
4D3/2			4.124391111	0.009107722	-0.001303099		
4D5/2			3.961891985	0.004014852	-0.001314527		
4F5/2			3.837503962	0.000600196	-0.000077762		
4F7/2			3.763982379	0.000212668	-0.000075730		
5S1/2			2.207365181	0.003385841	-0.000858661		
5P1/2			2.192005831	0.005607103	-0.000877545		
5P3/2			1.921487781	0.002903427	-0.000357403		
5D3/2			1.776491608	0.001920243	-0.000278215		
5D5/2			1.704304794	0.000847328	-0.000278451		
5F5/2			1.184534472	0.000074403	-0.000009717		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
5F7/2			1.139878332	0.000025200	-0.000009045		
6S1/2			0.985965067	0.000666993	-0.000169614		
6P1/2			0.890172339	0.000917790	-0.000143818		
6P3/2			0.733616778	0.000399651	-0.000049500		
7S1/2			0.312192142	0.000051122	-0.000013005		
2P1/2 -- (2)	2081.465890	-3585.465885	22.914570529	0.865566738		-0.179777811	0.013594859
2P3/2			18.933396726	0.085545672	-0.000550358		
3S1/2			9.180849090	0.031061491	-0.002045244		
3P1/2			9.531133890	0.073773052	-0.010584207		
3P3/2			8.700785713	0.022057846	-0.000582704		
3D1/2			9.283988134	0.116459984	-0.027696453		
3D5/2			9.054937276	0.003167441	-0.000793295		
4S1/2			4.533365124	0.008464863	-0.000624964		
4P1/2			4.590339283	0.018817943	-0.002970369		
4P3/2			4.123044056	0.005948626	-0.000184656		
4D3/2			4.136154266	0.028057839	-0.006869311		
4D5/2			4.019676262	0.000893365	-0.000211761		
4F5/2			3.838802242	0.000674071	-0.000140996		
4F7/2			3.766447872	0.000636261	-0.000013953		
5S1/2			2.249535770	0.002312661	-0.000175436		
5P1/2			2.197686421	0.004829980	-0.000778654		
5P3/2			1.947017669	0.001517532	-0.000348874		
5D3/2			1.779213178	0.006008363	-0.001480509		
5D5/2			1.716624358	0.000195846	-0.000045773		
5F5/2			1.184698045	0.000084013	-0.000017688		
5F7/2			1.140171890	0.000004343	-0.000001677		
6S1/2			0.994231548	0.000455547	-0.000034788		
6P1/2			0.891134210	0.000788177	-0.000127668		
6P3/2			0.737116150	0.000208557	-0.000006770		
7S1/2			0.312825273	0.000034915	-0.000002669		
2P3/2 -- (4)	1194.429757	-2457.074040	17.144197921	0.326185425		-0.005809194	0.001149920
3S1/2			8.764052220	0.037586879	-0.003272939		
3P1/2			9.465609979	0.022503501	-0.001382891		
3P3/2			8.146200851	0.041517258	-0.003922637		
3D3/2			9.278874324	0.035332097	-0.003348023		
3D5/2			8.687218701	0.057491017	-0.016355150		
4S1/2			4.422090729	0.009479336	-0.000873808		
4P1/2			4.563813933	0.005684802	-0.000314931		
4P3/2			3.986463833	0.010478098	-0.001100767		
4D3/2			4.132267986	0.007981771	-0.000760963		
4D5/2			3.933744367	0.012896278	-0.003799456		
4F5/2			3.836842318	0.000544788	-0.000052381		
4F7/2			3.761887698	0.000464421	-0.000150687		
5S1/2			2.219239736	0.002544016	-0.000238221		
5P1/2			2.189838591	0.001457513	-0.000083501		
5P3/2			1.912876333	0.002630731	-0.000282923		
5D3/2			1.778215236	0.001688345	-0.000161283		
5D5/2			1.698554807	0.002687029	-0.000797161		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
5F5/2			1.184456226	0.000066988	-0.000006487		
5F7/2			1.139636626	0.000054487	-0.000017829		
6S1/2			0.988268414	0.000498941	-0.000046907		
6P1/2			0.889815016	0.000237797	-0.000013728		
6P3/2			0.732444125	0.000360310	-0.000038941		
7S1/2			0.312368279	0.000038217	-0.000003595		
3S1/2 -- (2)	660.986440	-1289.638548	6.838408598	0.024672087		-0.211462885	0.011120534
3P1/2			6.348472956	0.008343598	-0.000078157		
3P3/2			5.845390254	0.011722442	-0.001590153		
3D3/2			6.732847168	0.007313450	-0.000294972		
3D5/2			6.583379509	0.009106019	-0.000380199		
4S1/2			3.793325927	0.004268460	-0.001489211		
4P1/2			3.952220793	0.006240673	-0.001068691		
4P3/2			3.532688767	0.002898036	-0.000387103		
4D3/2			3.648849481	0.002101005	-0.000200670		
4D5/2			3.539746593	0.002124187	-0.000163819		
4F5/2			3.683053892	0.002179813	-0.000306513		
4F7/2			3.623311868	0.000983012	-0.000299379		
5S1/2			2.057622589	0.001159636	-0.000419837		
5P1/2			2.036516079	0.001683683	-0.000297900		
5P3/2			1.801163739	0.000781166	-0.000109433		
5D3/2			1.677086696	0.000488848	-0.000051400		
5D5/2			1.617272944	0.000447110	-0.000041810		
5F5/2			1.167363109	0.000215658	-0.000031658		
5F7/2			1.124933672	0.000099026	-0.000029764		
6S1/2			0.956841849	0.000227956	-0.000083079		
6P1/2			0.864911695	0.000277163	-0.000049329		
6P3/2			0.717196151	0.000108469	-0.000015334		
7S1/2			0.309964032	0.000017466	-0.000006371		
3P1/2 -- (2)	656.428591	-1283.606657	7.353993941	0.049723520		-0.048186809	0.003559648
3P3/2			6.440681102	0.004451874	-0.000102682		
3D3/2			6.606453457	0.017432303	-0.001699300		
3D5/2			6.937983211	0.006667950	-0.000077483		
4S1/2			3.936604054	0.003551215	-0.000418714		
4P1/2			3.887978641	0.006235383	-0.001406761		
4P3/2			3.602378071	0.001528291	-0.000097893		
4D3/2			3.678283067	0.004474875	-0.000633660		
4D5/2			3.587867091	0.001486836	-0.000047873		
4F5/2			3.675481209	0.003699559	-0.000818935		
4F7/2			3.659226678	0.000396199	-0.000086505		
5S1/2			2.091009171	0.000943227	-0.000120563		
5P1/2			2.025396187	0.001574681	-0.000377553		
5P3/2			1.817269514	0.000399172	-0.000028500		
5D3/2			1.683821482	0.001064104	-0.000166027		
5D5/2			1.627026740	0.000304494	-0.000011937		
5F5/2			1.166808139	0.000372892	-0.000085351		
5F7/2			1.128553125	0.000043434	-0.000008898		
6S1/2			0.963195299	0.000184495	-0.000023989		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
6P1/2			0.863258255	0.060256023	-0.000062065		
6P3/2			0.719368287	0.000055080	-0.000004013		
7S1/2			0.310448587	0.000014126	-0.000001841		
3P3/2 -- (4)	429.856754	-983.678842	6.087166640	0.021098382		-0.001693493	0.000327450
3D3/2			6.503304785	0.004698100	-0.000022557		
3D5/2			6.171449200	0.011453156	-0.000219919		
4S1/2			3.820801045	0.005544289	-0.000749121		
4P1/2			3.900550401	0.002403843	-0.000185267		
4P3/2			3.452892824	0.003772955	-0.000552659		
4D3/2			3.596150423	0.002029683	-0.000193079		
4D5/2			3.480199793	0.004190431	-0.000654546		
4F5/2			3.647096684	0.001870039	-0.000187634		
4F7/2			3.560829770	0.001807639	-0.000532545		
5S1/2			2.061486358	0.001350549	-0.000191150		
5P1/2			2.023526843	0.000591705	-0.000051470		
5P3/2			1.782905691	0.000930283	-0.000146579		
5D3/2			1.666292796	0.000453319	-0.000045596		
5D5/2			1.605212907	0.000899660	-0.000155620		
5F5/2			1.163731447	0.000175723	-0.000018394		
5F7/2			1.119118849	0.000168722	-0.000049694		
6S1/2			0.957455767	0.000259699	-0.000037140		
6P1/2			0.862798866	0.000095799	-0.000008535		
6P3/2			0.714737633	0.000126939	-0.000020257		
7S1/2			0.310009491	0.000019836	-0.000002841		
3D3/2 -- (4)	422.951476	-974.493479	7.131018402	0.036325380		-0.000040859	0.000010359
3D5/2			7.045919935	0.006467357	-0.000000878		
4S1/2			3.951184354	0.001904467	-0.000050570		
4P1/2			3.984952847	0.004029091	-0.000319078		
4P3/2			3.602305384	0.001268159	-0.000032857		
4D3/2			3.631049970	0.004482073	-0.000447963		
4D5/2			3.602264126	0.001455768	-0.000021678		
4F5/2			3.634180911	0.008413897	-0.002087213		
4F7/2			3.662153191	0.000287912	-0.000033796		
5S1/2			2.093793077	0.000497715	-0.000017542		
5P1/2			2.045304466	0.000935215	-0.000079011		
5P3/2			1.816882153	0.000316123	-0.000010032		
5D3/2			1.675810979	0.000902397	-0.000100011		
5D5/2			1.629865006	0.000300506	-0.000005500		
5F5/2			1.163166376	0.000836281	-0.000211810		
5F7/2			1.128985378	0.000032552	-0.000003515		
6S1/2			0.963691666	0.000097082	-0.000003632		
6P1/2			0.866351436	0.000149621	-0.000012840		
6P3/2			0.719305512	0.000043232	-0.000001426		
7S1/2			0.310486062	0.000007430	-0.000000280		
3D5/2 -- (6)	384.662060	-918.945927	6.836487652	0.029397362		-0.000006497	0.000002528
4S1/2			3.917033486	0.002200909	-0.000050569		
4P1/2			3.984386546	0.001589583	-0.000025158		
4P3/2			3.558964407	0.002443575	-0.000108299		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
4D3/2			3.681696471	0.001186906	-0.000024322		
4D5/2			3.520692378	0.003870335	-0.000278940		
4F5/2			3.755028952	0.001770675	-0.000129344		
4F7/2			3.581267232	0.005230414	-0.001455303		
5S1/2			2.084945119	0.000558140	-0.000017511		
5P1/2			2.043492761	0.000387784	-0.000087555		
5P3/2			1.806793471	0.000579289	-0.000029164		
5D3/2			1.683750919	0.000245097	-0.000006185		
5D5/2			1.614799840	0.000765272	-0.000061511		
5F5/2			1.169864827	0.000178518	-0.000013106		
5F7/2			1.121459051	0.000494245	-0.000139829		
6S1/2			0.961966688	0.000108203	-0.000003623		
6P1/2			0.866007927	0.000062667	-0.000001515		
6P3/2			0.717943025	0.000078454	-0.000004053		
7S1/2			0.310354042	0.000008274	-0.000000280		
4S1/2 -- (2)	231.219316	-553.819646	3.155873424	0.002446588		-0.059189577	0.003104375
4P1/2			2.822803489	0.001013893	-0.000039569		
4P3/2			2.644044539	0.001581047	-0.000343500		
4D3/2			2.849744998	0.001041995	-0.000099356		
4D5/2			2.794835257	0.000875975	-0.000114864		
4F5/2			2.952123838	0.000734317	-0.000060481		
4F7/2			2.925470023	0.000760179	-0.000062752		
5S1/2			1.838314149	0.000480195	-0.000210282		
5P1/2			1.835370420	0.000529280	-0.000102731		
5P3/2			1.640355019	0.000235430	-0.000054934		
5D3/2			1.538636764	0.000126822	-0.000015532		
5D5/2			1.488611725	0.000167793	-0.000015888		
5F5/2			1.105247753	0.000044052	-0.000002814		
5F7/2			1.068046518	0.000059221	-0.000002701		
6S1/2			0.916473780	0.000094232	-0.000042509		
6P1/2			0.833157727	0.000091179	-0.000018237		
6P3/2			0.695851168	0.000033062	-0.000007671		
7S1/2			0.306896492	0.000007215	-0.000003265		
4P1/2 -- (2)	224.915697	-543.896429	3.195221806	0.004615214		-0.013507462	0.000992152
4P3/2			2.833241025	0.000397284	-0.000017697		
4D3/2			2.692155849	0.002665496	-0.000490052		
4D5/2			2.869196021	0.000512266	-0.000020596		
4F5/2			2.911101434	0.001206823	-0.000153098		
4F7/2			2.965076503	0.000554855	-0.000018577		
5S1/2			1.878048188	0.000516306	-0.000076770		
5P1/2			1.799781607	0.000619285	-0.000182027		
5P3/2			1.656059404	0.000136358	-0.000013738		
5D3/2			1.531102247	0.000240124	-0.000042103		
5D5/2			1.495415259	0.000121349	-0.000005504		
5F5/2			1.134928935	0.000070652	-0.000005715		
5F7/2			1.069910398	0.000046810	-0.000001195		
6S1/2			0.922825921	0.000097049	-0.000015352		
6P1/2			0.828544620	0.000099552	-0.000030630		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
6P3/2			0.697723813	0.000019241	-0.000002088		
7S1/2			0.307370042	0.000007390	-0.000001178		
4P3/2 -- (4)	154.240701	-440.694344	2.709339947	0.002020476		-0.000479113	0.000092987
4D3/2			2.729303114	0.000543790	-0.000014261		
4D5/2			2.573518976	0.001267383	-0.000100929		
4F5/2			2.792766036	0.000469753	-0.000017492		
4F7/2			2.736070606	0.000823859	-0.000052267		
5S1/2			1.829346051	0.000896372	-0.000140277		
5P1/2			1.802779831	0.000288223	-0.000026985		
5P3/2			1.603132111	0.000373851	-0.000070526		
5D3/2			1.515574507	0.000117326	-0.000011054		
5D5/2			1.463169066	0.000274054	-0.000027680		
5F5/2			1.092733292	0.000038269	-0.000002006		
5F7/2			1.055694018	0.000064454	-0.000004061		
6S1/2			0.914163182	0.000155253	-0.000025473		
6P1/2			0.827991982	0.000044886	-0.000004663		
6P3/2			0.691101147	0.000050351	-0.000010029		
7S1/2			0.306713586	0.000011712	-0.000001933		
4D3/2 -- (4)	144.564754	-423.791049	2.769469006	0.002834242		-0.000013322	0.000003359
4D5/2			2.749259373	0.000503746	-0.000000151		
4F5/2			2.698441291	0.001436086	-0.000136242		
4F7/2			2.819722216	0.000460416	-0.000002833		
5S1/2			1.847210276	0.000265718	-0.000010955		
5P1/2			1.795806785	0.000654924	-0.000076860		
5P3/2			1.631302214	0.000145558	-0.000006500		
5D3/2			1.497489766	0.000368325	-0.000047476		
5D5/2			1.474811905	0.000111488	-0.000002462		
5F5/2			1.092546425	0.000123746	-0.000013863		
5F7/2			1.059224719	0.000036171	-0.000000638		
6S1/2			0.917154597	0.000048573	-0.000002581		
6P1/2			0.827552069	0.000093572	-0.000011545		
6P3/2			0.694414597	0.000019409	-0.000000979		
7S1/2			0.306937999	0.000003689	-0.000000202		
4D5/2 -- (6)	132.639078	-404.134818	2.684796080	0.002303046		-0.000002124	0.000000823
4F5/2			2.783933912	0.000397029	-0.000006586		
4F7/2			2.669750573	0.001213462	-0.000080257		
5S1/2			1.832736613	0.000308311	-0.000010657		
5P1/2			1.800910395	0.000188798	-0.000004588		
5P3/2			1.614765312	0.000322865	-0.000025571		
5D3/2			1.514298448	0.000096878	-0.000002904		
5D5/2			1.450987961	0.000313243	-0.000029336		
5F5/2			1.091599152	0.000033096	-0.000001533		
5F7/2			1.053444631	0.000104808	-0.000010441		
6S1/2			0.914624049	0.000054342	-0.000002556		
6P1/2			0.827708692	0.000028666	-0.000000952		
6P3/2			0.692388049	0.000041133	-0.000003428		
7S1/2			0.306746406	0.000004113	-0.000000200		
4F5/2 -- (6)	118.876941	-380.415577	2.858512457	0.003009386		-0.000000007	0.000000003

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
EINSTEINIUM 5F11 Z=99 A=254 R=1.43614E-04 A.U.							
4F7/2			2.883595741	0.000484754	-0.000000004		
5S1/2			1.857153625	0.000160449	-0.00030222		
5P1/2			1.810189755	0.000227353	-0.000001525		
5P3/2			1.636912060	0.000102723	-0.000000525		
5D3/2			1.516605466	0.000216987	-0.000008758		
5D5/2			1.478179130	0.000073279	-0.000000712		
5F5/2			1.088680936	0.000168450	-0.000338862		
5F7/2			1.063581698	0.000041131	-0.000000255		
6S1/2			0.918949539	0.000030047	-0.000000250		
6P1/2			0.829614081	0.000034177	-0.000000545		
6P3/2			0.695160059	0.000013696	-0.000000125		
7S1/2			0.307073162	0.00002288	-0.000000022		
4F7/2 -- (8)	114.805453	-373.063360	2.823850272	0.002742913		-0.000000002	0.000000001
5S1/2			1.850561900	0.000194778	-0.000000179		
5P1/2			1.814422895	0.000141490	-0.000000212		
5P3/2			1.628649143	0.000168333	-0.000001213		
5D3/2			1.522492690	0.000081550	-0.000000396		
5D5/2			1.468132698	0.000185576	-0.000005559		
5F5/2			1.098275929	0.000036155	-0.000000283		
5F7/2			1.053528237	0.000151366	-0.000006143		
6S1/2			0.917769092	0.000034620	-0.000000243		
6P1/2			0.829801158	0.000021244	-0.000000121		
6P3/2			0.694173724	0.000021543	-0.000000262		
7S1/2			0.306983536	0.000002623	-0.000000021		
5S1/2 -- (2)	76.367577	-251.507171	1.549910547	0.000264279		-0.016295366	0.000854028
5P1/2			1.351368581	0.000162155	-0.000014202		
5P3/2			1.271673805	0.000252014	-0.000065926		
5D3/2			1.281956558	0.000162731	-0.000021087		
5D5/2			1.253709436	0.000089251	-0.000021966		
5F5/2			0.997528898	0.000059280	-0.000007546		
5F7/2			0.968472647	0.000030057	-0.000007072		
6S1/2			0.843898506	0.000040828	-0.000020395		
6P1/2			0.780141525	0.000026660	-0.000006004		
6P3/2			0.659571209	0.000015429	-0.000005298		
7S1/2			0.301578832	0.000003135	-0.000001599		
5P1/2 -- (2)	70.999659	-240.684622	1.535008527	0.000458505		-0.003551970	0.000260505
5P3/2			1.333193657	0.000039638	-0.000002540		
5D3/2			1.195606059	0.000430005	-0.000096996		
5D5/2			1.262795812	0.000035428	-0.000003761		
5F5/2			0.977399957	0.000097158	-0.000019625		
5F7/2			0.967378879	0.000015951	-0.000002107		
6S1/2			0.852215095	0.000059772	-0.000009623		
6P1/2			0.766849481	0.000040598	-0.000013901		
6P3/2			0.661651692	0.000007257	-0.000000901		
7S1/2			0.302107744	0.000004403	-0.000000733		
5P3/2 -- (4)	49.131239	-201.027943	1.276450169	0.000200300		-0.000123844	0.000023765
5D3/2			1.213647555	0.000074758	-0.000004731		
5D5/2			1.139307515	0.000147158	-0.000027553		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
EINSTEINIUM	5F11	Z=99	A=254	R=1.43614E-04	A.U.		
5F5/2			0.961024083	0.000041249	-0.000003615		
5F7/2			0.923798841	0.000044658	-0.000009907		
6S1/2			0.831805043	0.000103969	-0.000016694		
6P1/2			0.766701223	0.000022190	-0.000002217		
6P3/2			0.648147443	0.000020581	-0.000004343		
7S1/2			0.300699832	0.000007254	-0.000001207		
5D3/2 -- (4)	40.166528	-179.257921	1.166880743	0.000218312		-0.000003052	0.000000768
5D5/2			1.157397298	0.000038493	-0.000000017		
5F5/2			0.890249716	0.000135402	-0.000028910		
5F7/2			0.914884575	0.000015176	-0.000000507		
6S1/2			0.819434729	0.000025709	-0.000000906		
6P1/2			0.746268810	0.000062120	-0.000007506		
6P3/2			0.646733210	0.000009834	-0.000000549		
7S1/2			0.299875840	0.000001842	-0.000000087		
5D5/2 -- (6)	36.594134	-171.291518	1.129127219	0.000174928		-0.000000480	0.000000186
5F5/2			0.925855971	0.000030432	-0.000001618		
5F7/2			0.869913644	0.000085717	-0.000017939		
6S1/2			0.811698337	0.000031881	-0.000000763		
6P1/2			0.750907254	0.000015240	-0.000000327		
6P3/2			0.640868625	0.000024116	-0.000002406		
7S1/2			0.299383255	0.000002143	-0.000000079		
5F5/2 -- (6)	18.512937	-117.331965	0.780234919	0.000078451		-0.000000001	0.000000000
5F7/2			0.776296613	0.000011960	-0.000000000		
6S1/2			0.720406322	0.000010823	-0.000000365		
6P1/2			0.663456607	0.000013632	-0.000000410		
6P3/2			0.593654617	0.000004570	-0.000000025		
7S1/2			0.292971507	0.000000759	-0.000000000		
5F7/2 -- (5)	17.216005	-112.899259	0.751791936	0.000066979		-0.000000000	0.000000000
6S1/2			0.707755604	0.000013584	-0.000000403		
6P1/2			0.666670814	0.000008401	-0.000000056		
6P3/2			0.581207716	0.000008959	-0.000000096		
7S1/2			0.291811999	0.000000942	-0.000000000		
6S1/2 -- (2)	17.611317	-104.108347	0.701517967	0.000020343		-0.003216162	0.000168525
6P1/2			0.585739120	0.000020943	-0.000002774		
6P3/2			0.533379193	0.000022697	-0.000006287		
7S1/2			0.287427445	0.000001139	-0.000000541		
6P1/2 -- (2)	13.823735	-92.000134	0.628397842	0.000027966		-0.000582903	0.000042735
6P3/2			0.538234922	0.000002201	-0.000000139		
7S1/2			0.286960528	0.000002315	-0.000000351		
6P3/2 -- (4)	8.246457	-74.110930	0.503451563	0.000010256		-0.000017070	0.000003274
7S1/2			0.279000122	0.000003389	-0.000000464		
7S1/2 -- (2)	1.551715	-31.405067	0.227792569	0.000000575		-0.000246575	0.000012920
ETOT	-33915.50590	43368.44634	-89324.19008	12003.40652	55.129263358	-5.761031373	-13.301947393
							0.765044288

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
1S1/2 -- (2)	8394.052708	-14316.087464	80.529035858	16.022433224		-5.541141347	0.322821102
2S1/2			25.591068473	0.927265120	-0.115754515		
2P1/2			32.491304952	1.903816624	-0.220703487		
2P3/2			23.967781507	0.743269864	-0.214532920		
3S1/2			10.681090001	0.207250417	-0.027574080		
3P1/2			12.125306656	0.384370375	-0.043185496		
3P3/2			9.774270846	0.175962272	-0.052321227		
3D3/2			9.965763767	0.007462309	-0.000790284		
3D5/2			9.388673279	0.002902934	-0.000927093		
4S1/2			4.981939701	0.057229267	-0.007722314		
4P1/2			5.303748429	0.101294918	-0.011298489		
4P3/2			4.438950677	0.047538103	-0.014234452		
4D3/2			4.346890741	0.002324324	-0.000246940		
4D5/2			4.142402712	0.000908355	-0.000292907		
4F5/2			3.907681665	0.000007767	-0.000000750		
4F7/2			3.830745128	0.000003037	-0.000000997		
5S1/2			2.397577566	0.015808935	-0.002141333		
5P1/2			2.408963175	0.026429305	-0.002942304		
5P3/2			2.047993193	0.012228859	-0.003668438		
5D3/2			1.848574514	0.000532555	-0.000056622		
5D5/2			1.764795539	0.000205319	-0.000066357		
5F5/2			1.224215832	0.000001050	-0.000000102		
5F7/2			1.177826169	0.000000392	-0.000000129		
6S1/2			1.034200351	0.003113479	-0.000422131		
6P1/2			0.936354502	0.004311605	-0.000479783		
6P3/2			0.755978286	0.001659521	-0.000498027		
7S1/2			0.318017414	0.000233550	-0.000031670		
2S1/2 -- (2)	2155.578467	-3696.769997	18.446439197	0.391851856		-0.950643915	0.051374341
2P1/2			18.640247351	0.120328503	-0.000108271		
2P3/2			16.293470818	0.152271945	-0.008461600		
3S1/2			8.692016320	0.047600748	-0.011286141		
3P1/2			9.659881327	0.083159969	-0.012573914		
3P3/2			8.416167576	0.041510380	-0.004296671		
3D3/2			9.379451829	0.041895967	-0.005670840		
3D5/2			8.936707040	0.017410885	-0.005558625		
4S1/2			4.452560676	0.013028649	-0.003261146		
4P1/2			4.656714585	0.022705066	-0.003525921		
4P3/2			4.083086817	0.011681497	-0.001384981		
4D3/2			4.191322590	0.009521225	-0.001360474		
4D5/2			4.022938794	0.004186909	-0.001373041		
4F5/2			3.902542515	0.000625729	-0.000080964		
4F7/2			3.826372595	0.000221446	-0.000078860		
5S1/2			2.252539557	0.003589286	-0.000908860		
5P1/2			2.240208092	0.005963546	-0.000931281		
5P3/2			1.957083896	0.003029632	-0.000370081		
5D3/2			1.814138644	0.002032384	-0.000294098		
5D5/2			1.738763913	0.000894155	-0.000294347		
5F5/2			1.223545760	0.000080615	-0.000010516		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
5F7/2			1.177282693	0.000027276	-0.000309792		
6S1/2			1.035692657	0.000706391	-0.000179364		
6P1/2			0.908825691	0.000974272	-0.000152335		
6P3/2			0.743659579	0.000411824	-0.000050624		
7S1/2			0.315879593	0.000052983	-0.000013459		
2P1/2 -- (2)	2164.288886	-3707.550228	23.360223391	0.907959331		-0.198889620	0.015256665
2P3/2			19.209106744	0.088076127	-0.000598639		
3S1/2			9.340546331	0.032575782	-0.002132911		
3P1/2			9.669924092	0.077499182	-0.011079350		
3P3/2			8.822929999	0.022813794	-0.000602840		
3D3/2			9.414042088	0.120456817	-0.028643793		
3D5/2			9.168408383	0.003249855	-0.000818233		
4S1/2			4.615113676	0.008909361	-0.000654300		
4P1/2			4.676008455	0.019845152	-0.003121867		
4P3/2			4.187163914	0.006187157	-0.000191912		
4D3/2			4.203694173	0.029262256	-0.007162743		
4D5/2			4.081595129	0.000923677	-0.000220241		
4F5/2			3.903874827	0.000700264	-0.000146420		
4F7/2			3.828873084	0.000037575	-0.000014472		
5S1/2			2.296423289	0.002453888	-0.000185201		
5P1/2			2.246196430	0.005141534	-0.000826195		
5P3/2			1.983526110	0.001592222	-0.000051242		
5D3/2			1.817031934	0.006345311	-0.001563287		
5D5/2			1.751420817	0.000204947	-0.000048183		
5F5/2			1.223720257	0.000090718	-0.000019095		
5F7/2			1.177592208	0.000004679	-0.000001808		
6S1/2			1.014286606	0.000482910	-0.000036693		
6P1/2			0.909837733	0.000837411	-0.000135212		
6P3/2			0.747238460	0.000216085	-0.000007009		
7S1/2			0.316523716	0.000036220	-0.000002755		
2P3/2 -- (4)	1222.135446	-2511.416004	17.344489123	0.336858324		-0.006178963	0.001249528
3S1/2			8.901491530	0.039350098	-0.003452214		
3P1/2			9.618731161	0.023516642	-0.001132764		
3P3/2			8.249523178	0.042982450	-0.004064934		
3D3/2			9.400759321	0.036616268	-0.003462334		
3D5/2			8.792044047	0.059503691	-0.016928618		
4S1/2			4.497493844	0.009938393	-0.000922113		
4P1/2			4.644904748	0.005954417	-0.000330183		
4P3/2			4.045106451	0.010897912	-0.001146149		
4D3/2			4.197793472	0.008317295	-0.000791076		
4D5/2			3.992935077	0.013433899	-0.003958581		
4F5/2			3.901758985	0.000574206	-0.000055142		
4F7/2			3.824128462	0.000488978	-0.000158681		
5S1/2			2.264140058	0.002687433	-0.000253261		
5P1/2			2.237047831	0.001540519	-0.000088363		
5P3/2			1.947706343	0.002759110	-0.000297116		
5D3/2			1.815579849	0.001780295	-0.000169659		
5D5/2			1.732556995	0.002830907	-0.000840072		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
	5F5/2		1.223449013	0.000073338	-0.000007094		
	5F7/2		1.177013535	0.000059597	-0.000019509		
	6S1/2		1.007938389	0.000526487	-0.000049813		
	6P1/2		0.998307932	0.000250840	-0.000014500		
	6P3/2		0.742398178	0.000373133	-0.000040382		
	7S1/2		0.316047626	0.000039463	-0.000003736		
3S1/2 -- (2)	686.222532	-1330.618699	6.949541737	0.025883944		-0.227490263	0.012160560
	3P1/2		6.455328408	0.008747339	-0.000079628		
	3P3/2		5.929984375	0.012284434	-0.001716478		
	3D3/2		6.832427118	0.007645593	-0.000314259		
	3D5/2		6.676855446	0.009471558	-0.000405978		
	4S1/2		3.857143780	0.004490526	-0.001564186		
	4P1/2		4.021831602	0.006593371	-0.001127537		
	4P3/2		3.584958444	0.002981809	-0.000402885		
	4D3/2		3.706906897	0.002184111	-0.000208157		
	4D5/2		3.594058172	0.002217901	-0.000169410		
	4F5/2		3.745543462	0.002286423	-0.000321518		
	4F7/2		3.683668547	0.001029271	-0.000313978		
	5S1/2		2.098263768	0.001229729	-0.000444561		
	5P1/2		2.079394756	0.001795235	-0.000317232		
	5P3/2		1.833477045	0.000810699	-0.000114543		
	5D3/2		1.711647538	0.000515073	-0.000054093		
	5D5/2		1.649327962	0.000472440	-0.000043818		
	5F5/2		1.205433279	0.000234327	-0.000034424		
	5F7/2		1.161548932	0.000107521	-0.000032370		
	6S1/2		0.975718929	0.000241495	-0.000087889		
	6P1/2		0.882750561	0.000294961	-0.000052431		
	6P3/2		0.727603179	0.000111171	-0.000015843		
	7S1/2		0.313635466	0.000018107	-0.000006596		
3P1/2 -- (2)	681.975249	-1324.972732	7.479919961	0.052225486		-0.053405419	0.003999902
	3P3/2		6.534921884	0.064582210	-0.000112408		
	3D3/2		6.705066342	0.018313947	-0.001824274		
	3D5/2		7.038225410	0.006921108	-0.000083191		
	4S1/2		4.004215055	0.003730327	-0.000438622		
	4P1/2		3.956471162	0.006574695	-0.001479841		
	4P3/2		3.656628910	0.001578750	-0.000102495		
	4D3/2		3.737166529	0.0004621052	-0.0000650710		
	4D5/2		3.643468901	0.001557665	-0.000049865		
	4F5/2		3.738138615	0.003878710	-0.000858789		
	4F7/2		3.720367069	0.000413645	-0.000090658		
	5S1/2		2.132812876	0.000998957	-0.000127399		
	5P1/2		2.068029266	0.001675868	-0.000400966		
	5P3/2		1.850176593	0.000416236	-0.000030079		
	5D3/2		1.718666902	0.001114098	-0.000173142		
	5D5/2		1.659451159	0.000322840	-0.000012584		
	5F5/2		1.204883170	0.000405214	-0.000092819		
	5F7/2		1.165385117	0.000047083	-0.000009676		
	6S1/2		0.982285895	0.000195206	-0.000025329		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
6P1/2			0.881067216	0.000271942	-0.000065792		
6P3/2			0.729226854	0.000056724	-0.000004182		
7S1/2			0.314125622	0.000014626	-0.000001902		
3P3/2 -- (4)	441.040529	-1006.872667	6.164357556	0.021888567		-0.001808936	0.000357142
3D3/2			6.587316245	0.004871931	-0.000022971		
3D5/2			6.248398263	0.011867642	-0.000228342		
4S1/2			3.882397310	0.005859905	-0.000794435		
4P1/2			3.965725932	0.002537133	-0.000195547		
4P3/2			3.501911113	0.003933984	-0.000576793		
4D3/2			3.650792982	0.002126682	-0.000202388		
4D5/2			3.531250543	0.004373863	-0.000683851		
4F5/2			3.707093111	0.001960070	-0.000196603		
4F7/2			3.618257357	0.001894871	-0.0003558096		
5S1/2			2.101531101	0.001434915	-0.000203813		
5P1/2			2.065198756	0.000628958	-0.000054765		
5P3/2			1.814282147	0.000978048	-0.000154299		
5D3/2			1.700010344	0.000480708	-0.000048376		
5D5/2			1.636454888	0.000949907	-0.000164605		
5F5/2			1.201408775	0.000190246	-0.000019927		
5F7/2			1.155242345	0.000182933	-0.000053853		
6S1/2			0.976211304	0.000275477	-0.000039540		
6P1/2			0.880447087	0.000101590	-0.000009063		
6P3/2			0.724450262	0.000131771	-0.000021057		
7S1/2			0.313670847	0.000020589	-0.000002960		
3D3/2 -- (4)	434.041635	-997.593422	7.225443330	0.037709336		-0.000044803	0.000011606
3D5/2			7.135436774	0.006699260	-0.000000951		
4S1/2			4.016111762	0.001995369	-0.000053083		
4P1/2			4.052575254	0.004241809	-0.000338117		
4P3/2			3.654318705	0.001321909	-0.000034275		
4D3/2			3.686822375	0.004680875	-0.000468727		
4D5/2			3.655979974	0.001518812	-0.000022648		
4F5/2			3.694315314	0.008827085	-0.002189961		
4F7/2			3.722201701	0.000302125	-0.000035453		
5S1/2			2.134886967	0.000525287	-0.000018583		
5P1/2			2.087804125	0.000991801	-0.000084319		
5P3/2			1.849219230	0.000332317	-0.000010568		
5D3/2			1.709941791	0.000953327	-0.000105933		
5D5/2			1.661928186	0.000317096	-0.000005821		
5F5/2			1.200871467	0.000907752	-0.000230036		
5F7/2			1.165722089	0.000035470	-0.000003824		
6S1/2			0.982641505	0.000102341	-0.000003846		
6P1/2			0.884127102	0.000158292	-0.000013671		
6P3/2			0.729087653	0.000044875	-0.000001484		
7S1/2			0.314151734	0.000007665	-0.000000290		
3D5/2 -- (6)	393.948530	-939.498024	6.919919658	0.030450985		-0.000007061	0.000002811
4S1/2			3.980399555	0.002303761	-0.000053043		
4P1/2			4.051121565	0.001665145	-0.000026374		
4P3/2			3.609566825	0.002544378	-0.000113053		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
			4D3/2	3.737684868	0.001238241	-0.000025454	
			4D5/2	3.572257165	0.004033536	-0.000291412	
			4F5/2	3.766413495	0.001858150	-0.000135596	
			4F7/2	3.639092899	0.005485216	-0.001526254	
			5S1/2	2.125565178	0.000588194	-0.000018543	
			5P1/2	2.08564236	0.000409588	-0.000009290	
			5P3/2	1.838708691	0.000607991	-0.000030707	
			5D3/2	1.717949087	0.000258723	-0.000006560	
			5D5/2	1.646292725	0.000806178	-0.000065006	
			5F5/2	1.207913885	0.000193823	-0.000014217	
			5F7/2	1.157720350	0.000536198	-0.000151753	
			6S1/2	0.980826134	0.000113884	-0.000003835	
			6P1/2	0.883733650	0.000066048	-0.000001606	
			6P3/2	0.727685956	0.000081294	-0.000004215	
			7S1/2	0.314015772	0.000008522	-0.000000290	
4S1/2 --	(2)	240.532082	-571.304211	3.209283130	0.002578343	-0.063907734	0.003406958
			4P1/2	2.871934293	0.001063494	-0.000040613	
			4P3/2	2.685970056	0.001681030	-0.000370111	
			4D3/2	2.896066944	0.001097611	-0.000105251	
			4D5/2	2.839212064	0.000916395	-0.000121898	
			4F5/2	3.002928252	0.000771663	-0.000063574	
			4F7/2	2.975344940	0.000798763	-0.000066029	
			5S1/2	1.873512630	0.000510245	-0.000223385	
			5P1/2	1.872618806	0.000567702	-0.000110029	
			5P3/2	1.669133427	0.000246930	-0.000058856	
			5D3/2	1.569373262	0.000134561	-0.000016583	
			5D5/2	1.517339020	0.000177117	-0.000017005	
			5F5/2	1.140108251	0.000048036	-0.000003080	
			5F7/2	1.101768642	0.000064452	-0.000002953	
			6S1/2	0.934398887	0.000100017	-0.000045103	
			6P1/2	0.850174728	0.000097579	-0.000019490	
			6P3/2	0.705463399	0.000034152	-0.000008087	
			7S1/2	0.310562703	0.000007494	-0.000003390	
4P1/2 --	(2)	234.214450	-561.390583	3.251738273	0.004871720	-0.015032305	0.001119330
			4P3/2	2.878509308	0.000412977	-0.000019529	
			4D3/2	2.737053207	0.002825302	-0.000523178	
			4D5/2	2.915539101	0.000533115	-0.000022018	
			4F5/2	2.962127664	0.001270149	-0.000161438	
			4F7/2	3.016600022	0.000583259	-0.000019613	
			5S1/2	1.914503526	0.000546562	-0.000081250	
			5P1/2	1.836276362	0.000660298	-0.000194044	
			5P3/2	1.685465537	0.000142198	-0.000014610	
			5D3/2	1.561735276	0.000254697	-0.000045224	
			5D5/2	1.524487430	0.000127951	-0.000005890	
			5F5/2	1.139859889	0.000077054	-0.000006263	
			5F7/2	1.103796592	0.000050971	-0.000001312	
			6S1/2	0.940945739	0.000102642	-0.000016238	
			6P1/2	0.845486101	0.000105928	-0.000032584	

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
6P3/2			0.707388838	0.000019821	-0.000002190		
7S1/2			0.311040442	0.000007649	-0.000001220		
4P3/2 -- (4)	158.979344	-452.012065	2.748497332	0.002111112		-0.000514544	0.000100966
4D3/2			2.770410622	0.000566645	-0.000014613		
4D5/2			2.611549031	0.001323009	-0.000104754		
4F5/2			2.837064063	0.000490391	-0.000017996		
4F7/2			2.779258004	0.000862048	-0.000053883		
5S1/2			1.863221368	0.000959353	-0.000150253		
5P1/2			1.838078474	0.000309194	-0.000028914		
5P3/2			1.630560866	0.000394352	-0.000074580		
5D3/2			1.545118348	0.000125304	-0.000011855		
5D5/2			1.490765328	0.000291098	-0.000029571		
5F5/2			1.126633519	0.000042095	-0.000002239		
5F7/2			1.088497370	0.000070210	-0.000004539		
6S1/2			0.931843716	0.000165550	-0.000027198		
6P1/2			0.844721880	0.000047941	-0.000004980		
6P3/2			0.700600116	0.000052440	-0.000010469		
7S1/2			0.310365457	0.000012220	-0.000002020		
4D3/2 -- (4)	149.197926	-435.012608	2.812929184	0.002968668		-0.000014719	0.000003792
4D5/2			2.791470855	0.000526161	-0.000000165		
4F5/2			2.743393373	0.001500231	-0.000140641		
4F7/2			2.865994426	0.000483287	-0.000002938		
5S1/2			1.882135933	0.000281765	-0.000011657		
5P1/2			1.831391255	0.000699293	-0.000082339		
5P3/2			1.659691267	0.000153333	-0.000006869		
5D3/2			1.526887355	0.000390718	-0.000050621		
5D5/2			1.502957812	0.000117967	-0.000002621		
5F5/2			1.126607967	0.000136696	-0.000015610		
5F7/2			1.092337090	0.000039217	-0.000000705		
6S1/2			0.935000901	0.000051406	-0.000002745		
6P1/2			0.844350229	0.000099510	-0.000012325		
6P3/2			0.703986212	0.000020192	-0.000001022		
7S1/2			0.310597259	0.000003821	-0.000000210		
4D5/2 -- (6)	136.676436	-414.439884	2.725187035	0.002408201		-0.000002327	0.000000922
4F5/2			2.828969321	0.000414738	-0.000006732		
4F7/2			2.712888009	0.001268082	-0.000082338		
5S1/2			1.867006459	0.000326788	-0.000011323		
5P1/2			1.836395753	0.000200618	-0.000004886		
5P3/2			1.642627873	0.000340069	-0.000027004		
5D3/2			1.543940128	0.000102683	-0.000003100		
5D5/2			1.478401027	0.000331434	-0.000031221		
5F5/2			1.125503123	0.000036402	-0.000001717		
5F7/2			1.086195866	0.000115224	-0.000011779		
6S1/2			0.932360630	0.000057449	-0.000002717		
6P1/2			0.844465627	0.000030347	-0.000001014		
6P3/2			0.701919650	0.000042774	-0.000003575		
7S1/2			0.310401631	0.000004255	-0.000000208		
4F5/2 -- (6)	122.857009	-390.769100	2.908770722	0.003164716		-0.000000009	0.000000004

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM 5F12 Z=100 A=257 R=1.44177E-04 A.U.							
4F7/2			2.933917020	0.000509892	-0.000000004		
5S1/2			1.893096263	0.000169941	-0.000000248		
5P1/2			1.846966075	0.000241393	-0.000001661		
5P3/2			1.665943068	0.000108380	-0.000000569		
5D3/2			1.546986999	0.000229900	-0.000009332		
5D5/2			1.506817955	0.000077619	-0.000000761		
5F5/2			1.122806997	0.000183033	-0.000009770		
5F7/2			1.097135710	0.000044793	-0.000000283		
6S1/2			0.936965382	0.000031781	-0.000000269		
6P1/2			0.846566088	0.000036191	-0.000000587		
6P3/2			0.704802597	0.000014269	-0.000000133		
7S1/2			0.310742043	0.000002368	-0.000000023		
4F7/2 -- (8)	118.577789	-383.075239	2.872674527	0.002882640		-0.000000032	0.000000001
5S1/2			1.886234806	0.000206106	-0.000000200		
5P1/2			1.851141827	0.000150086	-0.000000231		
5P3/2			1.657463576	0.000177332	-0.000001313		
5D3/2			1.552883045	0.000086434	-0.000000428		
5D5/2			1.496499128	0.000196191	-0.000005904		
5F5/2			1.132798005	0.000039331	-0.000000313		
5F7/2			1.086571898	0.000164336	-0.000006770		
6S1/2			0.935737126	0.000036583	-0.000000262		
6P1/2			0.846734092	0.000022481	-0.000000131		
6P3/2			0.703800098	0.000022417	-0.000000278		
7S1/2			0.310650769	0.000002713	-0.000000022		
5S1/2 -- (2)	80.002436	-260.002387	1.580256564	0.000281398		-0.017738487	0.000944938
5P1/2			1.378737760	0.000170759	-0.000014743		
5P3/2			1.295822955	0.000271960	-0.000071321		
5D3/2			1.307596290	0.000173271	-0.000022451		
5D5/2			1.278215505	0.000094929	-0.000023405		
5F5/2			1.027155499	0.000064434	-0.000008198		
5F7/2			0.997388589	0.000032800	-0.000007689		
6S1/2			0.860570305	0.000043489	-0.000021723		
6P1/2			0.796179632	0.000028710	-0.000006447		
6P3/2			0.669087867	0.000016411	-0.000005662		
7S1/2			0.305267083	0.000003268	-0.000001666		
5P1/2 -- (2)	74.537392	-249.087244	1.536250834	0.000489794		-0.003991002	0.000296713
5P3/2			1.358633818	0.000041928	-0.000002845		
5D3/2			1.220318152	0.000460774	-0.000104015		
5D5/2			1.287952436	0.000037513	-0.000004038		
5F5/2			1.006411211	0.000105620	-0.000021318		
5F7/2			0.996490122	0.000017458	-0.000002292		
6S1/2			0.869201013	0.0000063270	-0.000010191		
6P1/2			0.782715289	0.000043376	-0.000014852		
6P3/2			0.671270132	0.000007500	-0.000000950		
7S1/2			0.305806440	0.000004565	-0.000000761		
5P3/2 -- (4)	51.052341	-206.898544	1.298824902	0.000211637		-0.000134174	0.000026285
5D3/2			1.236655363	0.000078523	-0.000004914		
5D5/2			1.160440661	0.000155205	-0.000028866		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
FERMIUM	5F12	Z=100 A=257 R=1.44177E-04 A.U.					
	5F5/2		0.988318491	0.000044389	-0.000003869		
	5F7/2		0.950069771	0.000048417	-0.000010622		
	6S1/2		0.847807557	0.000111616	-0.000017900		
	6P1/2		0.782148303	0.000023958	-0.000002386		
	6P3/2		0.657485873	0.000021514	-0.000004540		
	7S1/2		0.304362584	0.000007619	-0.000001266		
5D3/2 -- (4)	41.919722	-184.931958	1.190416089	0.000232311		-0.000003416	0.000000879
	5D5/2		1.180256624	0.000040789	-0.000000019		
	5F5/2		0.915459805	0.000145369	-0.000030864		
	5F7/2		0.941440961	0.000016630	-0.000000543		
	6S1/2		0.835715398	0.000027390	-0.000000970		
	6P1/2		0.761577349	0.000066498	-0.000008043		
	6P3/2		0.656285636	0.000010261	-0.000000573		
	7S1/2		0.303573430	0.000001921	-0.000000091		
5D5/2 -- (6)	38.114313	-176.524796	1.151005790	0.000185684		-0.000000532	0.000000211
	5F5/2		0.952081029	0.000032680	-0.000001717		
	5F7/2		0.894462729	0.000092177	-0.000019086		
	6S1/2		0.827656796	0.000033951	-0.000000814		
	6P1/2		0.766226777	0.000016278	-0.000000349		
	6P3/2		0.650339962	0.000025179	-0.000002514		
	7S1/2		0.303071117	0.000002235	-0.000000082		
5F5/2 -- (6)	19.725845	-122.421710	0.806473947	0.000086447		-0.000000001	0.000000001
	5F7/2		0.802483826	0.000013190	-0.000000000		
	6S1/2		0.738690529	0.000011602	-0.000000372		
	6P1/2		0.680418314	0.000014646	-0.000000409		
	6P3/2		0.605157782	0.000004830	-0.000000023		
	7S1/2		0.296998017	0.000000798	-0.000000000		
5F7/2 -- (6)	18.336574	-117.782711	0.777208117	0.000073789		-0.000000000	0.000000000
	6S1/2		0.725940324	0.000014656	-0.000000413		
	6P1/2		0.683718038	0.000009070	-0.000000056		
	6P3/2		0.592843692	0.000009477	-0.000000090		
	7S1/2		0.295882300	0.000000990	-0.000000000		
6S1/2 -- (2)	18.418467	-107.409572	0.715327207	0.000021608		-0.0003497781	0.000186293
	6P1/2		0.597520350	0.000022037	-0.000002906		
	6P3/2		0.542167152	0.000024188	-0.000006693		
	7S1/2		0.291123166	0.000001182	-0.000000560		
6P1/2 -- (2)	14.474800	-94.975513	0.641296969	0.000029768		-0.000653757	0.000048586
	6P3/2		0.547203173	0.000002303	-0.000000153		
	7S1/2		0.290685455	0.000002389	-0.000000362		
6P3/2 -- (4)	8.464462	-75.883040	0.510409760	0.000010679		-0.000018263	0.000003576
	7S1/2		0.282367293	0.000003522	-0.000000478		
7S1/2 -- (2)	1.587643	-32.101035	0.230402451	0.000000594		-0.000262425	0.000013976
ETDT	-34825.35138	44845.67041	-92020.23981	12311.30239	57.245141963	-5.971562733	-14.188238982
							0.830297526

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
1S1/2 -- (2)	8689.275654	-14757.339954	81.936178369	16.601531035		-5.892354995	0.349092075
2S1/2			26.064072328	0.964974555	-0.120683261		
2P1/2			33.177804539	1.979901518	-0.227283157		
2P3/2			24.258761643	0.765361489	-0.220882564		
3S1/2			10.872855463	0.215837880	-0.028759458		
3P1/2			12.364598748	0.399439692	-0.044367973		
3P3/2			9.904655186	0.181985513	-0.054100753		
3D3/2			10.098820623	0.007670329	-0.000806415		
3D5/2			9.501473239	0.002980778	-0.000951670		
4S1/2			5.074315893	0.059792271	-0.008079675		
4P1/2			5.410615883	0.105616622	-0.011641940		
4P3/2			4.506683505	0.049418434	-0.014794433		
4D3/2			4.416465110	0.002406443	-0.000253786		
4D5/2			4.204649161	0.000939969	-0.000303012		
4F5/2			3.972645639	0.000008079	-0.000000774		
4F7/2			3.892963008	0.000003166	-0.000001039		
5S1/2			2.448345024	0.016644004	-0.002257667		
5P1/2			2.464633068	0.027801437	-0.003058294		
5P3/2			2.085794299	0.012816105	-0.003843863		
5D3/2			1.886985341	0.000558067	-0.000058898		
5D5/2			1.799502042	0.000214912	-0.000069439		
5F5/2			1.262208286	0.000001132	-0.000000109		
5F7/2			1.213991724	0.000000423	-0.000000139		
6S1/2			1.055022981	0.003274502	-0.000444601		
6P1/2			0.956217505	0.004526751	-0.000497725		
6P3/2			0.765869583	0.001716744	-0.000515103		
7S1/2			0.321914367	0.000240292	-0.000032631		
2S1/2 -- (2)	2240.268254	-3821.341817	18.768597197	0.410554855		-1.021317937	0.056082391
2P1/2			18.988495506	0.126151539	-0.000109425		
2P3/2			16.526209838	0.158210685	-0.009170984		
3S1/2			8.836504401	0.049891126	-0.011806874		
3P1/2			9.830655049	0.087325095	-0.013176589		
3P3/2			8.530384357	0.042652373	-0.004372637		
3D3/2			9.508386307	0.043423174	-0.005870932		
3D5/2			9.049131036	0.017994404	-0.005752212		
4S1/2			4.530378001	0.013699328	-0.003423131		
4P1/2			4.742907252	0.023919794	-0.003706201		
4P3/2			4.144795046	0.012072668	-0.001419380		
4D3/2			4.258542622	0.009948414	-0.001419572		
4D5/2			4.084096068	0.004363731	-0.001433326		
4F5/2			3.967442147	0.000651422	-0.000084174		
4F7/2			3.888551187	0.000230254	-0.000082000		
5S1/2			2.298160371	0.003803023	-0.000961419		
5P1/2			2.288907489	0.006338431	-0.000987567		
5P3/2			1.992600581	0.003157376	-0.000382640		
5D3/2			1.851609047	0.002148332	-0.000310472		
5D5/2			1.772937071	0.000942242	-0.000310717		
5F5/2			1.261505441	0.000086918	-0.000011324		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
5F7/2			1.213423802	0.000029368	-0.000010545		
6S1/2			1.025534402	0.000747664	-0.000189543		
6P1/2			0.927605322	0.001033543	-0.000161234		
6P3/2			0.753404734	0.000423669	-0.000051675		
7S1/2			0.319751032	0.000054860	-0.000013913		
2P1/2 -- (2)	2251.067815	-3834.525607	23.817893180	0.952526783		-0.220136542	0.017120937
2P3/2			19.488022846	0.090639035	-0.000650817		
3S1/2			9.503421943	0.034164606	-0.002223947		
3P1/2			9.842115890	0.081416601	-0.011596203		
3P3/2			8.946078168	0.023584262	-0.000623543		
3D3/2			9.544999479	0.124526186	-0.029607761		
3D5/2			9.282141139	0.003332044	-0.000843444		
4S1/2			4.698195383	0.009376374	-0.000684798		
4P1/2			4.763079054	0.020926574	-0.003280255		
4P3/2			4.251669543	0.006431491	-0.000199365		
4D3/2			4.271539723	0.030498796	-0.007453744		
4D5/2			4.143601265	0.000954171	-0.000228888		
4F5/2			3.968807499	0.000726370	-0.000151820		
4F7/2			3.891083577	0.000038876	-0.000014986		
5S1/2			2.343818852	0.002602518	-0.000195376		
5P1/2			2.295215561	0.005470210	-0.000876010		
5P3/2			2.019970496	0.001668742	-0.000053672		
5D3/2			1.854679235	0.006691676	-0.001648319		
5D5/2			1.785922036	0.000214102	-0.000050639		
5F5/2			1.261690683	0.000097468	-0.000020510		
5F7/2			1.213748436	0.000005014	-0.000001939		
6S1/2			1.034466008	0.000511626	-0.000038672		
6P1/2			0.928669350	0.000889239	-0.000143100		
6P3/2			0.757061175	0.000223549	-0.000007247		
7S1/2			0.320405920	0.000037540	-0.000002840		
2P3/2 -- (4)	1250.236919	-2566.462008	17.545393719	0.347767314		-0.006568595	0.001356753
3S1/2			9.040858371	0.041196031	-0.003641028		
3P1/2			9.774089827	0.024574272	-0.001184565		
3P3/2			8.353216281	0.044483220	-0.004210795		
3D3/2			9.523135765	0.037931533	-0.003579038		
3D5/2			8.896988871	0.061561817	-0.017515081		
4S1/2			4.573865934	0.010417720	-0.000972838		
4P1/2			4.727053898	0.006235190	-0.000346004		
4P3/2			4.103933337	0.011329104	-0.001192804		
4D3/2			4.263496894	0.008661953	-0.000821875		
4D5/2			4.052155129	0.013985903	-0.004121973		
4F5/2			3.966528975	0.000604569	-0.000057987		
4F7/2			3.886151556	0.000514278	-0.000166920		
5S1/2			2.309428573	0.002837272	-0.000269080		
5P1/2			2.284656125	0.001627056	-0.000093418		
5P3/2			1.992413900	0.002890846	-0.000311700		
5D3/2			1.852735358	0.001874686	-0.000178219		
5D5/2			1.766251322	0.002978319	-0.000884050		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
			1.261388247	0.000079922	-0.000007722		
			1.213125792	0.000064868	-0.000021242		
			1.027710946	0.000555173	-0.000052860		
			0.926909980	0.000264405	-0.000015301		
			0.752051775	0.000385871	-0.000041816		
			0.319910326	0.000040708	-0.000003878		
3S1/2 -- (2)	712.539030	-1373.007523	7.062493840	0.027154404		-0.244864657	0.013298475
3P1/2			6.564048964	0.009170755	-0.000081117		
3P3/2			6.015456863	0.012877069	-0.001852918		
3D3/2			6.933036795	0.007992328	-0.000334960		
3D5/2			6.771134320	0.009848879	-0.000433639		
4S1/2			3.921832690	0.004723290	-0.001642509		
4P1/2			4.092438720	0.006964062	-0.001189240		
4P3/2			3.637483374	0.003066070	-0.000419511		
4D3/2			3.765248298	0.002268496	-0.000215710		
4D5/2			3.648542631	0.002314351	-0.000175035		
4F5/2			3.808010714	0.002396109	-0.000336952		
4F7/2			3.743934975	0.001076615	-0.000328983		
5S1/2			2.139275210	0.001303324	-0.000470443		
5P1/2			2.122662630	0.001912760	-0.000337537		
5P3/2			1.865712211	0.000840244	-0.000119831		
5D3/2			1.746052969	0.000541793	-0.000056823		
5D5/2			1.681141661	0.000498500	-0.000045836		
5F5/2			1.242483797	0.000253564	-0.000037275		
5F7/2			1.196937716	0.000116201	-0.000035046		
6S1/2			0.994699111	0.000255669	-0.000092908		
6P1/2			0.900701295	0.000313668	-0.000055683		
6P3/2			0.736527909	0.000113741	-0.000016353		
7S1/2			0.317492578	0.000018753	-0.000006821		
3P1/2 -- (2)	708.638187	-1367.787333	7.608104868	0.054852036		-0.059211832	0.004494010
3P3/2			6.630084442	0.004714679	-0.000122986		
3D3/2			6.804676846	0.019242439	-0.001959064		
3D5/2			7.139332841	0.007180799	-0.000089329		
4S1/2			4.072798681	0.003917863	-0.000459354		
4P1/2			4.025940744	0.006931295	-0.001556247		
4P3/2			3.711181337	0.001629672	-0.000107302		
4D3/2			3.796330354	0.004766916	-0.000667364		
4D5/2			3.699263052	0.001630986	-0.000051914		
4F5/2			3.800786682	0.004062732	-0.000899732		
4F7/2			3.781397058	0.000431350	-0.000094916		
5S1/2			2.175015439	0.001057414	-0.000134528		
5P1/2			2.111050757	0.001782451	-0.000425509		
5P3/2			1.883016450	0.000433477	-0.000031720		
5D3/2			1.753357601	0.001164212	-0.000180168		
5D5/2			1.691636292	0.000341838	-0.000013247		
5F5/2			1.241942540	0.000438497	-0.000100512		
5F7/2			1.200984854	0.000050788	-0.000010474		
6S1/2			1.001484817	0.000206409	-0.000026723		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
			0.898988157	0.000288673	-0.000069689		
			0.738802030	0.000058320	-0.000004353		
			0.317988039	0.000015130	-0.000001964		
3P3/2 -- (4)	452.410268	-1030.397534	6.241802522	0.022699894		-0.001931112	0.000389223
3D3/2			6.671618075	0.005050357	-0.000023390		
3D5/2			6.325506035	0.012292318	-0.000237095		
4S1/2			3.944648889	0.006193116	-0.000842320		
4P1/2			4.031610042	0.002677564	-0.000206318		
4P3/2			3.551057631	0.004099849	-0.000601663		
4D3/2			3.705551165	0.002226875	-0.000212000		
4D5/2			3.582332524	0.004562275	-0.000713937		
4F5/2			3.766951941	0.002052646	-0.000205821		
4F7/2			3.675498761	0.001984527	-0.000584359		
5S1/2			2.141882158	0.001523753	-0.000217175		
5P1/2			2.107176148	0.000668119	-0.000058218		
5P3/2			1.845544218	0.001027219	-0.000162255		
5D3/2			1.733527538	0.000509009	-0.000051249		
5D5/2			1.667419539	0.001001466	-0.000173833		
5F5/2			1.238045036	0.000205107	-0.000021496		
5F7/2			1.190126465	0.000197439	-0.000058096		
6S1/2			0.995058596	0.000292029	-0.000042063		
6P1/2			0.898194499	0.000107660	-0.000009615		
6P3/2			0.733879547	0.000136595	-0.000021856		
7S1/2			0.317517394	0.000021351	-0.000003080		
3D3/2 -- (4)	445.314918	-1021.021238	7.320216410	0.039130756		-0.000049085	0.000012990
3D5/2			7.225144885	0.006936538	-0.000001030		
4S1/2			4.081782344	0.002090052	-0.000055700		
4P1/2			4.120965991	0.004464978	-0.000358221		
4P3/2			3.706482053	0.001377260	-0.000035735		
4D3/2			3.742720998	0.004885737	-0.000490146		
4D5/2			3.709737975	0.001583637	-0.000023645		
4F5/2			3.754324663	0.009252232	-0.002295694		
4F7/2			3.782055694	0.000316721	-0.000037158		
5S1/2			2.176306850	0.000554016	-0.000019671		
5P1/2			2.130626798	0.001051095	-0.000089919		
5P3/2			1.881442185	0.000348987	-0.000011120		
5D3/2			1.743875083	0.001005782	-0.000112044		
5D5/2			1.693710350	0.000334128	-0.000006152		
5F5/2			1.237541354	0.000981145	-0.000248765		
5F7/2			1.201208719	0.000038463	-0.000004140		
6S1/2			1.001685732	0.000107802	-0.000004068		
6P1/2			0.902004273	0.000167350	-0.000014545		
6P3/2			0.738582181	0.000046515	-0.000001542		
7S1/2			0.318602232	0.000007898	-0.000000301		
3D5/2 -- (6)	403.351597	-960.286545	7.003414035	0.031529280		-0.000007668	0.000003123
4S1/2			4.044444680	0.002410863	-0.000055611		
4P1/2			4.118577493	0.001743801	-0.000027633		
4P3/2			3.660283207	0.002648037	-0.000117959		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
403/2			3.793766414	0.001291042	-0.000026621		
405/2			3.623828428	0.004201138	-0.000304244		
4F5/2			3.827642912	0.001948175	-0.000142021		
4F7/2			3.696712809	0.005747186	-0.001599202		
5S1/2			2.166491734	0.000619447	-0.000019621		
5P1/2			2.128200170	0.000432279	-0.000009848		
5P3/2			1.870500111	0.000637469	-0.000032298		
5D3/2			1.751936564	0.000272733	-0.000006946		
5D5/2			1.677499534	0.000848080	-0.000068598		
5F5/2			1.244915360	0.000209539	-0.000015355		
5F7/2			1.192737448	0.000579347	-0.000163938		
6S1/2			0.999776564	0.000119770	-0.000004056		
6P1/2			0.901558014	0.000069557	-0.000001701		
6P3/2			0.737141758	0.000084120	-0.000004376		
7S1/2			0.317862355	0.000008767	-0.000000300		
4S1/2 -- (2)	250.223240	-589.322520	3.263384877	0.002716607		-0.069031669	0.003738798
4P1/2			2.921721507	0.001115414	-0.000041675		
4P3/2			2.728264632	0.001787903	-0.000398788		
4D3/2			2.942719798	0.001156068	-0.000111521		
4D5/2			2.883856895	0.000958193	-0.000129374		
4F5/2			3.053954097	0.000810603	-0.000066838		
4F7/2			3.025403778	0.000838729	-0.000069488		
5S1/2			1.909026866	0.000541815	-0.000237122		
5P1/2			1.910191929	0.000608337	-0.000117728		
5P3/2			1.697867774	0.000258907	-0.000063058		
5D3/2			1.599991418	0.000142578	-0.000017686		
5D5/2			1.545878929	0.000186653	-0.000018183		
5F5/2			1.174043415	0.000052161	-0.000003358		
5F7/2			1.134376448	0.000069844	-0.000003216		
6S1/2			0.952423406	0.000106077	-0.000047815		
6P1/2			0.867296423	0.000104329	-0.000020807		
6P3/2			0.714814219	0.000035244	-0.000008521		
7S1/2			0.314416875	0.000007775	-0.000003516		
4P1/2 -- (2)	243.898039	-579.425913	3.309009417	0.005141274		-0.016733346	0.001262464
4P3/2			2.924126191	0.000429338	-0.000021534		
4D3/2			2.782301965	0.002994795	-0.000558646		
4D5/2			2.962153124	0.000554358	-0.000023537		
4F5/2			3.013376236	0.001336311	-0.000170269		
4F7/2			3.068321354	0.000612623	-0.000020710		
5S1/2			1.951296281	0.000578232	-0.000085928		
5P1/2			1.873091061	0.000703510	-0.000206665		
5P3/2			1.714838084	0.000148121	-0.000015527		
5D3/2			1.592248207	0.000269873	-0.000048550		
5D5/2			1.553378261	0.000134678	-0.000006295		
5F5/2			1.173870429	0.000083680	-0.000006837		
5F7/2			1.136571675	0.000055264	-0.000001434		
6S1/2			0.959167812	0.000108482	-0.000017162		
6P1/2			0.862532060	0.000112631	-0.000034630		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
6P3/2			0.716791511	0.000020387	-0.000002293		
7S1/2			0.314898461	0.000007909	-0.000001261		
4P3/2 -- (4)	163.806012	-463.496790	2.787747659	0.002204618		-0.000552206	0.000110601
4D3/2			2.811603542	0.000590176	-0.000014968		
4D5/2			2.649622102	0.001380297	-0.000108709		
4F5/2			2.881325210	0.000511630	-0.000018510		
4F7/2			2.822388074	0.000901348	-0.000055538		
5S1/2			1.897303667	0.001026238	-0.000160827		
5P1/2			1.873590782	0.000331498	-0.000030952		
5P3/2			1.657905727	0.000415523	-0.000078770		
5D3/2			1.574499764	0.000133609	-0.000012690		
5D5/2			1.518140285	0.000308671	-0.000031528		
5F5/2			1.159583628	0.000046094	-0.000002484		
5F7/2			1.120169129	0.000076132	-0.000005045		
6S1/2			0.949606740	0.000176415	-0.000029015		
6P1/2			0.861541421	0.000051171	-0.000005313		
6P3/2			0.709837347	0.000054536	-0.000010912		
7S1/2			0.314204850	0.000012737	-0.000002107		
4D3/2 -- (4)	153.916076	-446.396474	2.856471289	0.003107457		-0.000016245	0.000004275
4D5/2			2.833719962	0.000549189	-0.000000181		
4F5/2			2.788309546	0.001566323	-0.000145161		
4F7/2			2.912205327	0.000506848	-0.000003046		
5S1/2			1.917296712	0.000298569	-0.000012391		
5P1/2			1.867192870	0.000746160	-0.000088134		
5P3/2			1.687995922	0.000161349	-0.000007244		
5D3/2			1.556132157	0.000413876	-0.000053883		
5D5/2			1.530884483	0.000124631	-0.000002786		
5F5/2			1.159728939	0.000150255	-0.000017465		
5F7/2			1.124321460	0.000042333	-0.000000775		
6S1/2			0.952932562	0.000054360	-0.000002916		
6P1/2			0.861239192	0.000105750	-0.000013147		
6P3/2			0.713293141	0.000020976	-0.000001064		
7S1/2			0.314443745	0.000003953	-0.000000219		
4D5/2 -- (6)	140.775309	-424.873015	2.765577156	0.002516462		-0.000002546	0.000001032
4F5/2			2.873923428	0.000432945	-0.000006878		
4F7/2			2.755928569	0.001324236	-0.000308452		
5S1/2			1.901485228	0.000346147	-0.000012016		
5P1/2			1.872090832	0.000213020	-0.000005196		
5P3/2			1.670397361	0.000357813	-0.000028485		
5D3/2			1.573414533	0.000108677	-0.000003304		
5D5/2			1.505592098	0.000350159	-0.000033168		
5F5/2			1.158459208	0.000039858	-0.000001912		
5F7/2			1.117819479	0.000126045	-0.000013198		
6S1/2			0.950178812	0.000060684	-0.000002884		
6P1/2			0.861311186	0.000032108	-0.000001079		
6P3/2			0.711187496	0.000044417	-0.000003723		
7S1/2			0.314244114	0.000004396	-0.000000216		
4F5/2 -- (6)	126.893397	-401.238173	2.958876462	0.003324780		-0.000000010	0.000000005

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.4399CE-04 A.U.							
4F7/2			2.984058325	0.000535777	-0.000000005		
5S1/2			1.929255715	0.000179838	-0.000000275		
5P1/2			1.883952030	0.000256060	-0.000001801		
5P3/2			1.694866691	0.000114210	-0.000000615		
5D3/2			1.577196802	0.000243221	-0.000009925		
5L5/2			1.535221808	0.000082087	-0.000000812		
5F5/2			1.156004696	0.000198041	-0.000010716		
5F7/2			1.129559089	0.000048554	-0.000000311		
6S1/2			0.955062456	0.000033582	-0.000000290		
6P1/2			0.863606356	0.000038287	-0.000000631		
6P3/2			0.714175392	0.000014842	-0.000000140		
7S1/2			0.314597320	0.000002448	-0.000000024		
4F7/2 -- (8)	122.398385	-393.190008	2.921298322	0.003026445		-0.000000002	0.000000001
5S1/2			1.922113042	0.000217922	-0.000000222		
5P1/2			1.888068003	0.000159064	-0.000000251		
5P3/2			1.686164975	0.000186600	-0.000001416		
5D3/2			1.583095945	0.000091473	-0.000000460		
5D5/2			1.524628076	0.000207098	-0.000006259		
5F5/2			1.166373002	0.000042603	-0.000000344		
5F7/2			1.118498611	0.000177610	-0.000007421		
6S1/2			0.953784637	0.000038621	-0.000000282		
6P1/2			0.863754277	0.000023767	-0.000000141		
6P3/2			0.713157037	0.000023291	-0.000000293		
7S1/2			0.314504423	0.000002802	-0.000000023		
5S1/2 -- (2)	83.777106	-268.719555	1.610855981	0.000299407		-0.019310311	0.001045058
5P1/2			1.406335053	0.000179731	-0.000015295		
5P3/2			1.319855832	0.000293399	-0.000077122		
5D3/2			1.333231588	0.000184349	-0.000023889		
5D5/2			1.302671592	0.000100856	-0.000024919		
5F5/2			1.056042221	0.000069764	-0.000008872		
5F7/2			1.025400385	0.000035626	-0.000008325		
6S1/2			0.877334590	0.000046280	-0.000023112		
6P1/2			0.812313868	0.000030883	-0.000006914		
6P3/2			0.678371145	0.000017459	-0.000006048		
7S1/2			0.309145910	0.000003402	-0.000001734		
5P1/2 -- (2)	78.214465	-257.710658	1.567746764	0.000522778		-0.004483315	0.000337706
5P3/2			1.384125773	0.000044359	-0.000003182		
5D3/2			1.245065404	0.000493416	-0.000111476		
5D5/2			1.313050365	0.000039657	-0.000004332		
5F5/2			1.034735050	0.000114389	-0.000023072		
5F7/2			1.024710790	0.000019011	-0.000002483		
6S1/2			0.886281080	0.000066915	-0.000010782		
6P1/2			0.798675140	0.000046299	-0.000015850		
6P3/2			0.680653082	0.000007740	-0.000001002		
7S1/2			0.309695044	0.000004728	-0.000000788		
5P3/2 -- (4)	53.002769	-212.835138	1.321113477	0.000223342		-0.000145187	0.000029030
5D3/2			1.259541007	0.000082387	-0.000005099		
5D5/2			1.181429538	0.000163492	-0.000030216		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
MENDELEVIUM 5F13 Z=101 A=256 R=1.43990E-04 A.U.							
5F5/2			1.014837070	0.000047586	-0.000004125		
5F7/2			0.975436332	0.000052264	-0.000011341		
6S1/2			0.863851964	0.000119724	-0.000019174		
6P1/2			0.797656924	0.000025847	-0.000002564		
6P3/2			0.666589793	0.000022451	-0.000004738		
7S1/2			0.308214531	0.000007993	-0.000001326		
5D3/2 -- (4)	43.699424	-190.663266	1.213810251	0.000246800		-0.000003816	0.000001003
5D5/2			1.202943180	0.000043146	-0.000000021		
5F5/2			0.940013958	0.000155538	-0.000032842		
5F7/2			0.967125595	0.000018136	-0.000000580		
6S1/2			0.852031810	0.000029143	-0.000001036		
6P1/2			0.776923686	0.000071102	-0.000008605		
6P3/2			0.665594450	0.000010688	-0.000000596		
7S1/2			0.307458989	0.000002001	-0.000000095		
5D5/2 -- (6)	39.650102	-181.796353	1.172687097	0.000196762		-0.000000589	0.000000239
5F5/2			0.977570201	0.000034967	-0.000001815		
5F7/2			0.918189854	0.000098742	-0.000020234		
6S1/2			0.843634841	0.000036116	-0.000000866		
6P1/2			0.781588167	0.000017370	-0.000000371		
6P3/2			0.659566948	0.000026243	-0.000002622		
7S1/2			0.306946729	0.000002327	-0.000000086		
5F5/2 -- (6)	20.944741	-127.483172	0.831892777	0.000094732		-0.000000001	0.000000001
5F7/2			0.827732302	0.000014458	-0.000000000		
6S1/2			0.756627328	0.000012411	-0.000000379		
6P1/2			0.697098246	0.000015703	-0.000000410		
6P3/2			0.616170250	0.000005089	-0.000000021		
7S1/2			0.301164439	0.000000837	-0.000000000		
5F7/2 -- (7)	19.455935	-122.613264	0.801605483	0.000080799		-0.000000000	0.000000000
6S1/2			0.743676625	0.000015759	-0.000000424		
6P1/2			0.700398440	0.000009761	-0.000000057		
6P3/2			0.603921653	0.000000990	-0.000000084		
7S1/2			0.300075378	0.000001038	-0.000000000		
6S1/2 -- (2)	19.252688	-110.777468	0.729207324	0.000022932		-0.003803867	0.000205821
6P1/2			0.609364779	0.000023172	-0.000003043		
6P3/2			0.550843249	0.000025753	-0.000007116		
7S1/2			0.295015613	0.000001225	-0.000000578		
6P1/2 -- (2)	15.148925	-98.012229	0.654266700	0.000031658		-0.000733063	0.000055197
6P3/2			0.556046679	0.000002407	-0.000000169		
7S1/2			0.294606528	0.000002463	-0.000000372		
6P3/2 -- (4)	8.677204	-77.643841	0.517148409	0.000011100		-0.000019507	0.000003899
7S1/2			0.285902578	0.000003657	-0.000000493		
7S1/2 -- (2)	1.622850	-32.823066	0.233339223	0.000000616		-0.000279190	0.000015106
ETOT	-35753.63762	46377.17637	-94795.12891	12625.31324	59.429956899	-6.187706330	-15.141729366
							0.901153572

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM 5F14 Z=102 A=254 R=1.43614E-04 A.U.							
1S1/2 -- (2)	8996.622804	-15213.783210	83.376699190	17.199009186		-6.267228908	0.377449456
2S1/2			26.548370093	1.004143476	-0.125808763		
2P1/2			33.885009330	2.058821546	-0.233958601		
2P3/2			24.551271818	0.787779359	-0.227323069		
3S1/2			11.068521586	0.224749078	-0.029989818		
3P1/2			12.609771162	0.415007118	-0.045555151		
3P3/2			10.035782456	0.188136089	-0.055917679		
3D3/2			10.232509352	0.007878429	-0.000822074		
3D5/2			9.614382677	0.003058552	-0.000976170		
4S1/2			5.168257779	0.062454415	-0.008450947		
4P1/2			5.519621249	0.110083148	-0.011986593		
4P3/2			4.574746413	0.051346525	-0.015368468		
4D3/2			4.486288035	0.002489229	-0.000260529		
4D5/2			4.266936360	0.000971830	-0.000313182		
4F5/2			4.037482470	0.000008392	-0.000000797		
4F7/2			3.954982001	0.000003295	-0.000001081		
5S1/2			2.499696865	0.017512411	-0.002378710		
5P1/2			2.521054110	0.029221595	-0.003175002		
5P3/2			2.123506609	0.013417935	-0.004023583		
5D3/2			1.925210776	0.000583835	-0.000061150		
5D5/2			1.833902616	0.000224579	-0.000072541		
5F5/2			1.299349443	0.000001215	-0.000000116		
5F7/2			1.249221365	0.000000455	-0.000000150		
6S1/2			1.075973671	0.003441371	-0.000467899		
6P1/2			0.976241945	0.004748747	-0.000515699		
6P3/2			0.775569195	0.001773840	-0.000532133		
7S1/2			0.325702318	0.000247557	-0.000033663		
2S1/2 -- (2)	2328.836934	-3950.727946	19.097821156	0.430173927		-1.097628846	0.061221725
2P1/2			19.345479787	0.132270132	-0.000110484		
2P3/2			16.761663021	0.164380257	-0.009938717		
3S1/2			8.983534510	0.052290013	-0.012350307		
3P1/2			10.004886945	0.091697089	-0.013806945		
3P3/2			8.645413684	0.043801394	-0.004446922		
3D3/2			9.638179958	0.044987325	-0.006075330		
3D5/2			9.161910345	0.018588563	-0.005949747		
4S1/2			4.609352246	0.014402509	-0.003592401		
4P1/2			4.830525090	0.025195441	-0.003894707		
4P3/2			4.206839456	0.012468287	-0.001453282		
4D3/2			4.326065201	0.010389572	-0.001480411		
4D5/2			4.145366282	0.004545363	-0.001495390		
4F5/2			4.032220832	0.000677246	-0.000087387		
4F7/2			3.950536742	0.000239081	-0.000085146		
5S1/2			2.344236536	0.004027455	-0.001016427		
5P1/2			2.338134814	0.006732845	-0.001046544		
5P3/2			2.028046546	0.003286585	-0.000395063		
5D3/2			1.888915373	0.002268140	-0.000327338		
5D5/2			1.806832498	0.000991582	-0.000327561		
5F5/2			1.298615402	0.000093308	-0.000012140		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM 5F14 Z=102 A=254 R=1.43614E-04 A.U.							
5F7/2			1.248630575	0.000031478	-0.000011305		
6S1/2			1.045484134	0.000790866	-0.000200162		
6P1/2			0.946514925	0.001095735	-0.000170533		
6P3/2			0.762968561	0.000435261	-0.000052663		
7S1/2			0.323509654	0.000056885	-0.000014403		
2P1/2 -- (2)	2342.048026	-3966.670345	24.288210103	0.999402797		-0.243737895	0.019211905
2P3/2			19.770226919	0.093232928	-0.000707177		
3S1/2			9.669546384	0.035831430	-0.002318396		
3P1/2			10.017860469	0.085536681	-0.012135822		
3P3/2			9.070257395	0.024369008	-0.000644842		
3D3/2			9.676876687	0.128665325	-0.030587854		
3D5/2			9.396132850	0.003413878	-0.000868903		
4S1/2			4.782637226	0.009867018	-0.000716508		
4P1/2			4.851616089	0.022065471	-0.003445855		
4P3/2			4.316581041	0.006681640	-0.000207027		
4D3/2			4.339708655	0.031767669	-0.007772440		
4D5/2			4.205698941	0.000984807	-0.000237697		
4F5/2			4.033618396	0.000752328	-0.000157181		
4F7/2			3.953098076	0.000040160	-0.000015495		
5S1/2			2.391729599	0.002758914	-0.000205971		
5P1/2			2.344777007	0.005817023	-0.000928207		
5P3/2			2.056361249	0.001747076	-0.000056165		
5D3/2			1.892168417	0.007047435	-0.001735602		
5D5/2			1.820136474	0.000223294	-0.000053140		
5F5/2			1.298811230	0.000104252	-0.000021930		
5F7/2			1.248969560	0.000005347	-0.000002070		
6S1/2			1.054764206	0.000541751	-0.000040726		
6P1/2			0.947633110	0.000943788	-0.000151343		
6P3/2			0.766701576	0.000230985	-0.000007484		
7S1/2			0.324176676	0.000038967	-0.000002932		
2P3/2 -- (4)	1278.738010	-2622.217279	17.746921186	0.358915284		-0.006978983	0.001472108
3S1/2			9.182154111	0.043128018	-0.003839699		
3P1/2			9.931761030	0.025678724	-0.001238346		
3P3/2			8.457285937	0.046020080	-0.004360277		
3D3/2			9.646009397	0.039278911	-0.003698148		
3D5/2			9.032050580	0.063665757	-0.018114640		
4S1/2			4.651213314	0.010918038	-0.001026069		
4P1/2			4.810304114	0.006527623	-0.000362408		
4P3/2			4.162956425	0.011771913	-0.001240760		
4D3/2			4.329391697	0.009015918	-0.000853372		
4D5/2			4.111407896	0.014552511	-0.004289716		
4F5/2			4.031170373	0.000635891	-0.000060914		
4F7/2			3.947975739	0.000540329	-0.000175404		
5S1/2			2.355111693	0.002993748	-0.000285699		
5P1/2			2.332689582	0.001717269	-0.000098670		
5P3/2			2.017007389	0.003025966	-0.000326678		
5D3/2			1.889694012	0.001971529	-0.000186962		
5D5/2			1.799646288	0.003129255	-0.000929093		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
	5F5/2		1.298475799	0.000086749	-0.000008373		
	5F7/2		1.248302277	0.000070312	-0.000023032		
	6S1/2		1.047579463	0.000585023	-0.000056051		
	6P1/2		0.945626902	0.000278504	-0.000016131		
	6P3/2		0.761521141	0.000398593	-0.000043251		
	7S1/2		0.323659952	0.000042050	-0.000004031		
3S1/2 -- (2)	739.963595	-1416.837650	7.177277793	0.028485735		-0.263642383	0.014541977
	3P1/2		6.674684355	0.009614693	-0.000082587		
	3P3/2		6.101813245	0.013502312	-0.002000091		
	3D3/2		7.034676076	0.008354262	-0.000357163		
	3D5/2		6.866207955	0.010238239	-0.000463297		
	4S1/2		3.987399335	0.004967169	-0.001724304		
	4P1/2		4.164078528	0.007354037	-0.001253996		
	4P3/2		3.690272583	0.003151022	-0.000437089		
	4D3/2		3.823883551	0.002354148	-0.000223326		
	4D5/2		3.703201769	0.002413580	-0.000180698		
	4F5/2		3.870472005	0.002508911	-0.000352819		
	4F7/2		3.804127706	0.001125046	-0.000344400		
	5S1/2		2.180663721	0.001380561	-0.000497516		
	5P1/2		2.166344438	0.002036639	-0.000358903		
	5P3/2		1.897877417	0.000869819	-0.000125331		
	5D3/2		1.780315336	0.000568988	-0.000059589		
	5D5/2		1.712722700	0.000525288	-0.000047863		
	5F5/2		1.278715096	0.000273399	-0.000040215		
	5F7/2		1.231425218	0.000125089	-0.000037799		
	6S1/2		1.013777572	0.000270497	-0.000098143		
	6P1/2		0.918767377	0.000333334	-0.000059095		
	6P3/2		0.745882738	0.000116209	-0.000016871		
	7S1/2		0.321233166	0.000019450	-0.000007063		
3P1/2 -- (2)	736.480535	-1412.123462	7.738642763	0.057610222		-0.065666166	0.005048364
	3P3/2		6.726194669	0.004849415	-0.000134481		
	3D3/2		6.905314483	0.020220836	-0.002104466		
	3D5/2		7.241324720	0.007447073	-0.000095928		
	4S1/2		4.142370815	0.004114112	-0.000480923		
	4P1/2		4.096429335	0.007306157	-0.001636140		
	4P3/2		3.766050363	0.001681031	-0.000112328		
	4D3/2		3.855788932	0.004912269	-0.000683569		
	4D5/2		3.755257435	0.001706861	-0.000054023		
	4F5/2		3.863445332	0.004251654	-0.000941770		
	4F7/2		3.842336034	0.000449298	-0.000099279		
	5S1/2		2.217626222	0.001118706	-0.000141967		
	5P1/2		2.154486866	0.001894728	-0.000451233		
	5P3/2		1.915798728	0.000450880	-0.000033427		
	5D3/2		1.787906756	0.001214337	-0.000187097		
	5D5/2		1.723591942	0.000361501	-0.000013925		
	5F5/2		1.278186869	0.000472786	-0.000108443		
	5F7/2		1.235678657	0.000054555	-0.000011294		
	6S1/2		1.020786396	0.000218120	-0.000028172		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
	6P1/2		0.917024827	0.000306252	-0.000073764		
	6P3/2		0.748206848	0.000059877	-0.000004526		
	7S1/2		0.321734836	0.000015673	-0.000002029		
3P3/2 -- (4)	463.968199	-1054.256507	6.319505966	0.023532733		-0.002060356	0.000423863
	3D3/2		6.756214316	0.005233459	-0.000023812		
	3D5/2		6.402772919	0.012727316	-0.000246194		
	4S1/2		4.007556168	0.006544752	-0.000892866		
	4P1/2		4.098229175	0.002825568	-0.000217599		
	4P3/2		3.600340519	0.004270666	-0.000627292		
	4D3/2		3.760434455	0.002330337	-0.000221920		
	4D5/2		3.633447677	0.004755719	-0.000744797		
	4F5/2		3.826688066	0.002147807	-0.000215289		
	4F7/2		3.732572161	0.002076642	-0.000611344		
	5S1/2		2.182544443	0.001617249	-0.000231262		
	5P1/2		2.149480750	0.000709286	-0.000061834		
	5P3/2		1.876699923	0.001077815	-0.000170448		
	5D3/2		1.766856528	0.000538235	-0.000054214		
	5D5/2		1.698115779	0.001054328	-0.000183298		
	5F5/2		1.273840287	0.000220325	-0.000023104		
	5F7/2		1.224095023	0.000212281	-0.000062435		
	6S1/2		1.013991342	0.000309379	-0.000044713		
	6P1/2		0.916044243	0.000114018	-0.000010191		
	6P3/2		0.743137480	0.000141434	-0.000022658		
	7S1/2		0.321246995	0.000022172	-0.000003209		
3D3/2 -- (4)	456.773211	-1044.779591	7.415341169	0.040590276		-0.000053731	0.000014524
	3D5/2		7.315043325	0.007179235	-0.000001115		
	4S1/2		4.148199347	0.002188650	-0.000058424		
	4P1/2		4.190153975	0.004699159	-0.000379445		
	4P3/2		3.758804471	0.001434248	-0.000037238		
	4D3/2		3.798755227	0.005096798	-0.000512235		
	4D5/2		3.763540673	0.001650271	-0.000024670		
	4F5/2		3.814225912	0.009689529	-0.002404457		
	4F7/2		3.841733359	0.000331706	-0.000038909		
	5S1/2		2.218058143	0.000583937	-0.000020808		
	5P1/2		2.173794853	0.001113223	-0.000095827		
	5P3/2		1.913559052	0.000366137	-0.000011689		
	5D3/2		1.777622771	0.001059779	-0.000118348		
	5D5/2		1.725220140	0.000351600	-0.000006492		
	5F5/2		1.273375696	0.001056549	-0.000268019		
	5F7/2		1.235771505	0.000041540	-0.000004464		
	6S1/2		1.020818004	0.000113468	-0.000004300		
	6P1/2		0.919986074	0.000176810	-0.000015464		
	6P3/2		0.747902154	0.000048159	-0.000001600		
	7S1/2		0.321736574	0.000008149	-0.000000312		
3D5/2 -- (6)	412.871103	-981.311430	7.086967012	0.032632470		-0.000008318	0.000003466
	4S1/2		4.109169460	0.002522186	-0.000058275		
	4P1/2		4.186781452	0.001825694	-0.000028936		
	4P3/2		3.711121301	0.002754614	-0.000123022		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E (KIN)	E (E-N)	E (E-E)	E (MAG)	E (RET)	E (V-P)	E (H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
			3.849949710	0.001345339	-0.000027824		
			3.675407728	0.004373201	-0.000317441		
			3.888734034	0.002040791	-0.000148620		
			3.754144138	0.006016435	-0.001674180		
			2.207729450	0.000651933	-0.000020744		
			2.171032191	0.000455891	-0.000010430		
			1.902175489	0.000667733	-0.000033939		
			1.785725112	0.000287129	-0.000007346		
			1.708428808	0.000890973	-0.000072285		
			1.281069685	0.000225684	-0.000016522		
			1.226834501	0.000622913	-0.000176417		
			1.018811533	0.000125864	-0.000004285		
			0.919484041	0.000073196	-0.000001799		
			0.746423173	0.000086946	-0.000004538		
			0.321592469	0.000009032	-0.000000310		
4S1/2 -- (2)	260.303400	-607.887200	3.318183581	0.002861649		-0.074580142	0.004102273
			2.972183002	0.001169714	-0.000042746		
			2.770935003	0.001902148	-0.000429654		
			2.989708712	0.001217502	-0.000118188		
			2.928770332	0.001001411	-0.000137317		
			3.105211416	0.000851198	-0.000070281		
			3.075656568	0.000880113	-0.000073139		
			1.944862097	0.000574964	-0.000251513		
			1.948109631	0.000651339	-0.000125856		
			1.726565445	0.000271429	-0.000067565		
			1.630502599	0.000150884	-0.000018843		
			1.574239777	0.000196398	-0.000019428		
			1.207244431	0.000056432	-0.000003649		
			1.166177539	0.000075413	-0.000003491		
			0.970541702	0.000112419	-0.000050647		
			0.884526398	0.000111448	-0.000022193		
			0.724010760	0.000036350	-0.000008977		
			0.318149496	0.000008077	-0.000003650		
4P1/2 -- (2)	253.987544	-598.027678	3.367068301	0.005424603		-0.018629087	0.001423486
			2.970106731	0.000446439	-0.000023727		
			2.827919484	0.003174643	-0.000596628		
			3.009047420	0.000575985	-0.000025160		
			3.064867160	0.001405448	-0.000179626		
			3.120260899	0.000642972	-0.000021872		
			1.988434975	0.000611349	-0.000090808		
			1.910247112	0.000749037	-0.000219918		
			1.744186158	0.000154130	-0.000016490		
			1.622653910	0.000285705	-0.000052100		
			1.582097539	0.000141523	-0.000006720		
			1.207152044	0.000090536	-0.000007438		
			1.168544447	0.000059705	-0.000001561		
			0.977487907	0.000114573	-0.000018123		
			0.879686522	0.000119674	-0.000036773		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM 5F14 Z=102 A=254 R=1.43614E-04 A.U.							
6P3/2			0.726039613	0.000020943	-0.000002400		
7S1/2			0.318635779	0.000008189	-0.000001306		
4P3/2 -- (4)	168.722544	-475.151086	2.827097895	0.002301068		-0.000592220	0.000121051
4D3/2			2.852889131	0.000614400	-0.000015327		
4D5/2			2.687741801	0.001439279	-0.000112800		
4F5/2			2.925562246	0.000533485	-0.000019036		
4F7/2			2.865473744	0.000941783	-0.000057235		
5S1/2			1.931595783	0.001097223	-0.000172023		
5P1/2			1.909332925	0.000355221	-0.000033104		
5P3/2			1.685173889	0.000437375	-0.000083099		
5D3/2			1.603730322	0.000142246	-0.000013560		
5D5/2			1.545302746	0.000326769	-0.000033549		
5F5/2			1.191773082	0.000050270	-0.000002744		
5F7/2			1.151013416	0.000082239	-0.000005579		
6S1/2			0.967446452	0.000187869	-0.000030929		
6P1/2			0.878453955	0.000054582	-0.000005662		
6P3/2			0.718920858	0.000056647	-0.000011357		
7S1/2			0.317921765	0.000013294	-0.000002202		
4D3/2 -- (4)	158.720759	-457.944909	2.900102634	0.003250716		-0.000017911	0.000004813
4D5/2			2.876010284	0.000572836	-0.000000198		
4F5/2			2.833201080	0.001634406	-0.000149805		
4F7/2			2.958367381	0.000531110	-0.000003158		
5S1/2			1.952696620	0.000316160	-0.000013158		
5P1/2			1.903227155	0.000795662	-0.000094261		
5P3/2			1.716223292	0.000169610	-0.000007630		
5D3/2			1.585234827	0.000437810	-0.000057264		
5D5/2			1.558599284	0.000131478	-0.000002956		
5F5/2			1.192097420	0.000164438	-0.000019429		
5F7/2			1.155482163	0.000045528	-0.000000848		
6S1/2			0.970943813	0.000057437	-0.000003095		
6P1/2			0.878222275	0.000112304	-0.000014012		
6P3/2			0.722442352	0.000021764	-0.000001107		
7S1/2			0.318168028	0.000004094	-0.000000227		
4D5/2 -- (6)	144.935988	-435.434680	2.805966825	0.002627881		-0.000002784	0.000001154
4F5/2			2.918804436	0.000451657	-0.000007026		
4F7/2			2.798880631	0.001381947	-0.000086600		
5S1/2			1.936175317	0.000366422	-0.000012736		
5P1/2			1.908010893	0.000226035	-0.000005519		
5P3/2			1.698080275	0.000376103	-0.000030018		
5D3/2			1.602732220	0.000114863	-0.000003516		
5D5/2			1.532569078	0.000369419	-0.000035178		
5F5/2			1.190655778	0.000043467	-0.000002117		
5F7/2			1.148617942	0.000137300	-0.000014702		
6S1/2			0.968072751	0.000064051	-0.000003058		
6P1/2			0.878248661	0.000033944	-0.000001146		
6P3/2			0.720298134	0.000046070	-0.000003872		
7S1/2			0.317963991	0.000004548	-0.000000225		
4F5/2 -- (6)	130.986695	-411.824205	3.008844915	0.003489658		-0.000000011	0.000000005

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
			3.034034753	0.000562420	-0.000000005		
			1.965637154	0.000190152	-0.000000302		
			1.921165057	0.000271379	-0.000001945		
			1.723690444	0.000120215	-0.000000663		
			1.607245484	0.000256957	-0.000010538		
			1.563398607	0.000086680	-0.000000864		
			1.188459627	0.000213496	-0.000011702		
			1.161155743	0.000052424	-0.000000340		
			0.973235117	0.000035451	-0.000000311		
			0.880738352	0.000040468	-0.000000676		
			0.723385764	0.000015418	-0.000000148		
			0.318329996	0.000002533	-0.000000029		
4F7/2 -- (8)	126.267704	-403.408927	2.969737912	0.003174394		-0.000000002	0.000000001
			1.958201641	0.000230243	-0.000000245		
			1.925218886	0.000168439	-0.000000271		
			1.714760953	0.000196138	-0.000001524		
			1.613142011	0.000096669	-0.000000494		
			1.552527538	0.000218297	-0.000000624		
			1.199188534	0.000045974	-0.000000377		
			1.149608775	0.000191227	-0.000008097		
			0.971905960	0.000040735	-0.000000302		
			0.883865138	0.000025104	-0.000000151		
			0.722351640	0.000024168	-0.000000308		
			0.318235266	0.000002897	-0.000000025		
5S1/2 -- (2)	87.695569	-277.663760	1.641713338	0.000318342		-0.021017631	0.001155172
			1.434170756	0.000189074	-0.000015857		
			1.343977776	0.000316434	-0.000083352		
			1.358870038	0.000195992	-0.000025403		
			1.327083127	0.000107041	-0.000026509		
			1.084361032	0.000075282	-0.000009568		
			1.052781810	0.000038543	-0.000008982		
			0.894186620	0.000049202	-0.000024564		
			0.828548258	0.000033185	-0.000007408		
			0.687519307	0.000018583	-0.000006459		
			0.312893563	0.000003546	-0.000001806		
5P1/2 -- (2)	82.037996	-266.564352	1.599514467	0.000557547		-0.005034760	0.000384082
			1.409679160	0.000046948	-0.000003552		
			1.269860198	0.000528053	-0.0000119409		
			1.338098182	0.000041864	-0.000004644		
			1.062539723	0.000123490	-0.000024892		
			1.052314307	0.000020611	-0.000002681		
			0.903451511	0.000070707	-0.000011396		
			0.814733834	0.000049374	-0.000016897		
			0.689899510	0.000007982	-0.000001055		
			0.313453068	0.000004901	-0.000000817		
5P3/2 -- (4)	54.982587	-218.838302	1.343322086	0.000235420		-0.000156919	0.000032019
			1.282312607	0.000086352	-0.000005286		
			1.202280443	0.000172022	-0.000031605		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
NOBELIUM	5F14	Z=102 A=254 R=1.43614E-04 A.U.					
5F5/2			1.040744758	0.000050850	-0.000004383		
5F7/2			1.030156527	0.000056211	-0.000012070		
6S1/2			0.879933147	0.000128313	-0.000020517		
6P1/2			0.813230492	0.000027865	-0.000002753		
6P3/2			0.675555208	0.000023394	-0.000004936		
7S1/2			0.311931842	0.000008393	-0.000001391		
5D3/2 -- (4)	45.505588	-196.452509	1.237071761	0.000261783		-0.000004256	0.000001142
5D5/2			1.225464224	0.000045565	-0.000000023		
5F5/2			0.964055806	0.000165936	-0.000034852		
5F7/2			0.992188961	0.000019694	-0.000000617		
6S1/2			0.868380469	0.000030970	-0.000001104		
6P1/2			0.792311651	0.000075942	-0.000009193		
6P3/2			0.674755804	0.000011116	-0.000000620		
7S1/2			0.311207125	0.000002085	-0.000000099		
5D5/2 -- (6)	41.201018	-187.106079	1.194177314	0.000208161		-0.000000651	0.000000270
5F5/2			1.002476240	0.000037298	-0.000001914		
5F7/2			0.941327314	0.000105439	-0.000021389		
6S1/2			0.859628630	0.000038377	-0.000000918		
6P1/2			0.796995379	0.000018519	-0.000000394		
6P3/2			0.668644678	0.000027312	-0.000002731		
7S1/2			0.310683700	0.000002424	-0.000000089		
5F5/2 -- (6)	22.171895	-132.533787	0.856694662	0.000103324		-0.000000032	0.000000001
5F7/2			0.852320052	0.000015770	-0.000000000		
6S1/2			0.774318939	0.000013252	-0.000000386		
6P1/2			0.713590618	0.000016805	-0.000000413		
6P3/2			0.626853626	0.000005351	-0.000000019		
7S1/2			0.305150426	0.000000878	-0.000000000		
5F7/2 -- (8)	20.578721	-127.420685	0.825322756	0.000088040		-0.000000000	0.000000000
6S1/2			0.761131459	0.000016899	-0.000000436		
6P1/2			0.716867974	0.000010476	-0.000000058		
6P3/2			0.614647491	0.000010503	-0.000000079		
7S1/2			0.304081015	0.000001088	-0.000000000		
6S1/2 -- (2)	20.114284	-114.212085	0.743151164	0.000024316		-0.004135556	0.000227253
6P1/2			0.621272194	0.000024348	-0.000003184		
6P3/2			0.559470822	0.000027308	-0.000007559		
7S1/2			0.298755073	0.000001271	-0.000000598		
6P1/2 -- (2)	15.846851	-101.111652	0.667313078	0.000033639		-0.000821708	0.000062660
6P3/2			0.564834848	0.000002517	-0.000000186		
7S1/2			0.298374084	0.000002542	-0.000000384		
6P3/2 -- (4)	8.886590	-79.404630	0.523788057	0.000011522		-0.000020808	0.000004244
7S1/2			0.289270651	0.000003799	-0.000000507		
7S1/2 -- (2)	1.660252	-33.542700	0.235989608	0.000000638		-0.000297549	0.000016350
ETOT	-36700.59746	47964.15712	-97650.38131	12945.53748	61.685257902	-6.409574897	-16.164452613

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 6D1 Z=103 A=257 R=1.44177E-04 A.U.							
1S1/2 -- (2)	9314.916664	-15684.111901	84.847642042	17.813653573		-6.663410577	0.407944204
2S1/2			27.043292383	1.044709635	-0.131128985		
2P1/2			34.613376990	2.140675209	-0.240727892		
2P3/2			24.845136108	0.810521671	-0.233854854		
3S1/2			11.267823692	0.233968218	-0.031264605		
3P1/2			12.860830867	0.431073262	-0.046742930		
3P3/2			10.167573471	0.194412523	-0.057769818		
3D3/2			10.366696472	0.008086533	-0.000837302		
3D5/2			9.727283350	0.003136218	-0.001000639		
4S1/2			5.263743786	0.065214135	-0.008836316		
4P1/2			5.630878871	0.114699632	-0.012332041		
4P3/2			4.643170622	0.053323938	-0.015956687		
4D3/2			4.556414476	0.002572819	-0.000267183		
4D5/2			4.329316012	0.001003986	-0.000323441		
4F5/2			4.102323330	0.000008704	-0.000000820		
4F7/2			4.016932223	0.000003425	-0.000001123		
5S1/2			2.552064375	0.018419993	-0.002505366		
5P1/2			2.578938230	0.030706182	-0.003293890		
5P3/2			2.162617114	0.014054476	-0.004213555		
5D3/2			1.966168003	0.000611765	-0.000063577		
5D5/2			1.871418321	0.000235237	-0.000075961		
5F5/2			1.363740637	0.000001353	-0.000000128		
5F7/2			1.317347919	0.000000512	-0.000000168		
6S1/2			1.107167651	0.003695036	-0.000503071		
6P1/2			1.011413640	0.005157583	-0.000552956		
6P3/2			0.804865764	0.001949053	-0.000584574		
6D3/2			0.421503369	0.000022699	-0.000002359		
7S1/2			0.352645932	0.000305671	-0.000041623		
2S1/2 -- (2)	2421.092200	-4084.721345	19.433697591	0.450704633		-1.179243108	0.066809669
2P1/2			19.711133216	0.138693274	-0.000111203		
2P3/2			16.999579969	0.170784255	-0.010766556		
3S1/2			9.132918613	0.054796422	-0.012916480		
3P1/2			10.182531730	0.096289352	-0.014466764		
3P3/2			8.761169870	0.044957972	-0.004519921		
3D3/2			9.768688314	0.046586791	-0.006283770		
3D5/2			9.274912564	0.019192613	-0.006150966		
4S1/2			4.689459191	0.015138628	-0.003769113		
4P1/2			4.919634475	0.026536633	-0.004092209		
4P3/2			4.269237902	0.012868801	-0.001486908		
4D3/2			4.393933439	0.010845102	-0.001543043		
4D5/2			4.206791156	0.004731949	-0.001559290		
4F5/2			4.097008682	0.000703272	-0.000090612		
4F7/2			4.012458393	0.000247953	-0.000088307		
5S1/2			2.391144399	0.004264194	-0.001074309		
5P1/2			2.388495168	0.007151631	-0.001108934		
5P3/2			2.064767603	0.003422154	-0.000407963		
5D3/2			1.928857713	0.002399240	-0.000345765		
5D5/2			1.843762280	0.001046229	-0.000346220		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 6D1 Z=103 A=257 R=1.44177E-04 A.U.							
5F5/2			1.362945376	0.000103900	-0.000013500		
5F7/2			1.316704560	0.000035318	-0.000012686		
6S1/2			1.074950508	0.000854767	-0.000215971		
6P1/2			0.979422966	0.001202996	-0.000186772		
6P3/2			0.791317183	0.000475464	-0.000057063		
6D3/2			0.420126875	0.000087970	-0.000012705		
7S1/2			0.349981562	0.000070702	-0.000017872		
2P1/2 -- (2)	2437.419774	-4104.203744	24.771607259	1.048706426		-0.269854947	0.021554113
2P3/2			20.055662858	0.095855248	-0.000767990		
3S1/2			9.838780981	0.037577416	-0.002416086		
3P1/2			10.197185300	0.089868182	-0.012698828		
3P3/2			9.195423842	0.025167334	-0.000666750		
3D3/2			9.809563673	0.132866990	-0.031582307		
3D5/2			9.510271463	0.003495085	-0.000894548		
4S1/2			4.868436586	0.010382182	-0.000749403		
4P1/2			4.941706444	0.023265450	-0.003619057		
4P3/2			4.381931743	0.006937681	-0.000214905		
4D3/2			4.408253676	0.033069720	-0.008088932		
4D5/2			4.267938273	0.001015571	-0.000246669		
4F5/2			4.098438284	0.000778153	-0.000162507		
4F7/2			4.015046456	0.000041427	-0.000015999		
5S1/2			2.440560817	0.002924363	-0.000217060		
5P1/2			2.395494959	0.006186092	-0.000983382		
5P3/2			2.094089531	0.001829811	-0.000058806		
5D3/2			1.932312369	0.007435552	-0.001830780		
5D5/2			1.857430752	0.000233417	-0.000055900		
5F5/2			1.363160221	0.000115642	-0.000024318		
5F7/2			1.317075166	0.000005968	-0.000002313		
6S1/2			1.084807041	0.000586192	-0.000043816		
6P1/2			0.980641084	0.001037376	-0.000165739		
6P3/2			0.795372191	0.000253786	-0.000008222		
6D3/2			0.420255331	0.000273365	-0.000067381		
7S1/2			0.350796241	0.000048487	-0.000003628		
2P3/2 -- (4)	1307.630650	-2678.674361	17.948983304	0.370300008		-0.007410955	0.001596118
3S1/2			9.325199142	0.045146496	-0.004048149		
3P1/2			10.091703950	0.026831620	-0.001294107		
3P3/2			8.561676746	0.047592733	-0.004513312		
3D3/2			9.769264583	0.040657267	-0.003819534		
3D5/2			9.107129227	0.065813470	-0.018726714		
4S1/2			4.729514830	0.011439816	-0.001081824		
4P1/2			4.894720156	0.006832326	-0.000379410		
4P3/2			4.222199220	0.012226700	-0.001290047		
4D3/2			4.395526684	0.009379567	-0.000885595		
4D5/2			4.170739768	0.015134295	-0.004461989		
4F5/2			4.095813651	0.000668248	-0.000063932		
4F7/2			4.009730328	0.000567195	-0.000184154		
5S1/2			2.401569490	0.003158068	-0.000303224		
5P1/2			2.381748510	0.001812213	-0.000104176		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 6D1	Z=103 A=257 R=1.44177E-04 A.U.						
5P3/2			2.052817274	0.003169003	-0.000342539		
5D3/2			1.929258273	0.002077252	-0.000196492		
5D5/2			1.836025344	0.003296484	-0.000978994		
5F5/2			1.362774693	0.000097691	-0.000009418		
5F7/2			1.316326270	0.000079797	-0.000026149		
6S1/2			1.076997456	0.000629860	-0.000060717		
6P1/2			0.978286484	0.000303745	-0.000017604		
6P3/2			0.789673182	0.000437847	-0.000047574		
6D3/2			0.420141820	0.000076185	-0.000007209		
7S1/2			0.350150345	0.000052060	-0.000005021		
3S1/2 -- (2)	768.443330	-1462.050789	7.293748567	0.029877631		-0.283743281	0.015895330
3P1/2			6.787170558	0.010079309	-0.000083950		
3P3/2			6.188971376	0.014161283	-0.002158281		
3D3/2			7.137221175	0.008731534	-0.000380918		
3D5/2			6.961955910	0.010639427	-0.000495021		
4S1/2			4.053810346	0.005222376	-0.001809688		
4P1/2			4.236781557	0.007765207	-0.001322112		
4P3/2			3.743330801	0.003237104	-0.000455750		
4D3/2			3.882829932	0.002441165	-0.000231019		
4D5/2			3.758055184	0.002515680	-0.000186416		
4F5/2			3.933032795	0.002625079	-0.000369155		
4F7/2			3.864352318	0.001174680	-0.000360263		
5S1/2			2.222746921	0.001462003	-0.000526004		
5P1/2			2.210949230	0.002168482	-0.000381576		
5P3/2			1.931127296	0.000900782	-0.000131249		
5D3/2			1.816886576	0.000598517	-0.000062586		
5D5/2			1.747006314	0.000554955	-0.000050096		
5F5/2			1.341343214	0.000305844	-0.000045016		
5F7/2			1.297903630	0.000140981	-0.000042685		
6S1/2			1.041633009	0.000292401	-0.000105924		
6P1/2			0.949783504	0.000366843	-0.000064945		
6P3/2			0.772918169	0.000126258	-0.000018526		
6D3/2			0.416025848	0.000022270	-0.000002361		
7S1/2			0.347230910	0.000024177	-0.000008767		
3P1/2 -- (2)	765.538305	-1458.024095	7.871533695	0.060505003		-0.072810913	0.005669297
3P3/2			6.823215307	0.004986496	-0.000146957		
3D3/2			7.006920052	0.021251814	-0.002261313		
3D5/2			7.344136477	0.007719706	-0.000103023		
4S1/2			4.212914519	0.004319168	-0.000503316		
4P1/2			4.167981256	0.007700310	-0.001719721		
4P3/2			3.821252267	0.001732837	-0.000117589		
4D3/2			3.915572297	0.005057028	-0.000699383		
4D5/2			3.811486120	0.001785385	-0.000056198		
4F5/2			3.926227920	0.004445873	-0.000984990		
4F7/2			3.903301110	0.000467522	-0.000103757		
5S1/2			2.260980004	0.001183276	-0.000149757		
5P1/2			2.198844779	0.002013989	-0.000478435		
5P3/2			1.949707032	0.000469101	-0.000035255		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
			1.824793462	0.001268320	-0.000194507		
			1.758299779	0.000383321	-0.000014676		
			1.340812758	0.000528876	-0.000121389		
			1.302585302	0.000061349	-0.000012749		
			1.049031850	0.000235502	-0.000030343		
			0.947949709	0.000336442	-0.000080845		
			0.775444976	0.000065363	-0.000005009		
			0.416318934	0.000047365	-0.000007365		
			0.347839764	0.000019459	-0.000002514		
3P3/2 --	(4)	475.709921	-1078.444850	6.397428135	0.024386986	-0.002196973	0.000461235
	3D3/2		6.841044107	0.005421186	-0.000024241		
	3D5/2		6.480141345	0.013172420	-0.000255665		
	4S1/2		4.071091939	0.006915347	-0.000946131		
	4P1/2		4.165614650	0.002981620	-0.000229412		
	4P3/2		3.649770232	0.004446586	-0.000653707		
	4D3/2		3.815467949	0.002437175	-0.000232159		
	4D5/2		3.684623362	0.004954356	-0.000776458		
	4F5/2		3.886413747	0.002245764	-0.000225030		
	4F7/2		3.789584564	0.002171428	-0.000639113		
	5S1/2		2.223837124	0.001716091	-0.000246170		
	5P1/2		2.192612483	0.000752931	-0.000065653		
	5P3/2		1.908874310	0.001131456	-0.000179139		
	5D3/2		1.802406625	0.000570158	-0.000057452		
	5D5/2		1.731420777	0.001112808	-0.000193760		
	5F5/2		1.335793157	0.000245515	-0.000025760		
	5F7/2		1.289644060	0.000238941	-0.000070245		
	6S1/2		1.041689606	0.000334851	-0.000048554		
	6P1/2		0.946724562	0.000125029	-0.000011183		
	6P3/2		0.769891919	0.000155724	-0.000024981		
	6D3/2		0.415497373	0.000021062	-0.000002139		
	7S1/2		0.347233655	0.000027589	-0.000004007		
3D3/2 --	(4)	468.406110	-1068.856675	7.510724063	0.042086933	-0.000058764	0.000016222
	3D5/2		7.405043179	0.007427135	-0.000001205		
	4S1/2		4.215333422	0.002291264	-0.000061257		
	4P1/2		4.260170380	0.004944988	-0.000401860		
	4P3/2		3.811295344	0.001492917	-0.000038786		
	4D3/2		3.854948136	0.005314262	-0.000535026		
	4D5/2		3.817416215	0.001718775	-0.000025724		
	4F5/2		3.874124344	0.010139991	-0.002516505		
	4F7/2		3.901350357	0.000347120	-0.000040713		
	5S1/2		2.260471427	0.000615284	-0.000022001		
	5P1/2		2.217820435	0.001178893	-0.000102109		
	5P3/2		1.946747355	0.000384318	-0.000012293		
	5D3/2		1.813628617	0.001118763	-0.000125235		
	5D5/2		1.759442290	0.000370947	-0.000006868		
	5F5/2		1.335357065	0.001180324	-0.000299575		
	5F7/2		1.302526470	0.000046976	-0.000006504		
	6S1/2		1.048875209	0.000122016	-0.000004645		

TABLE 1.—CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 601		Z=103 A=257 R=1.44177E-04 A.U.					
			0.950947885	0.0C0193405	-0.000017023		
			0.775025710	0.000053023	-0.000001766		
			0.415921059	0.0000040711	-0.000004626		
			0.347826146	0.000010077	-0.000000387		
3D5/2 -- (6)	422.497008	-1J02.560862	7.170496644	0.033759618		-0.000009016	0.000003841
			4.174543391	0.002638020	-0.0000061038		
			4.255764141	0.001910986	-0.000030285		
			3.762089734	0.0C2864177	-0.000128251		
			3.906259130	0.001401181	-0.000029064		
			3.727020773	0.004549857	-0.000331022		
			3.949800307	0.002136217	-0.000155408		
			3.811493609	0.006293591	-0.001751359		
			2.249604941	0.000685905	-0.000021923		
			2.214700405	0.000480693	-0.000011042		
			1.934895633	0.000699771	-0.000035680		
			1.821782941	0.000302845	-0.000007782		
			1.741998444	0.000938466	-0.000076366		
			1.343686065	0.000252167	-0.000018443		
			1.292652902	0.000701514	-0.000198749		
			1.046720730	0.000135123	-0.000004626		
			0.950366476	0.000079745	-0.000001971		
			0.773410658	0.0C0095552	-0.000005005		
			0.416204011	0.0C0011068	-0.000000293		
			0.347648219	0.000011148	-0.000000385		
4S1/2 -- (2)	270.768165	-626.992896	3.373657202	0.003013655		-0.080536113	0.004498974
			3.023329975	0.001226363	-0.000043793		
			2.813977057	0.002024139	-0.000462788		
			3.037036145	0.001282010	-0.000125261		
			2.973956429	0.001046110	-0.000145738		
			3.156749249	0.000893502	-0.000073905		
			3.126153091	0.000922993	-0.000076983		
			1.981257978	0.000609945	-0.000266675		
			1.986767778	0.000697298	-0.000134518		
			1.756137097	0.000284982	-0.000072498		
			1.662888694	0.000159983	-0.000020117		
			1.604811934	0.000207162	-0.000020821		
			1.263894657	0.000063347	-0.000004117		
			1.226646580	0.000085250	-0.000003968		
			0.996452892	0.000121719	-0.000054808		
			0.913438095	0.000123303	-0.000024518		
			0.749489403	0.000039905	-0.000010067		
			0.410474700	0.000005910	-0.000000764		
			0.343526903	0.0C0010056	-0.000004543		
4P1/2 -- (2)	264.505980	-617.223448	3.425954113	0.005722579		-0.020734026	0.001604394
			3.016470552	0.000464374	-0.000026123		
			2.873934640	0.003365568	-0.000637300		
			3.056248340	0.000598010	-0.000026895		
			3.116675267	0.001477725	-0.000189531		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
			3.172494182	0.000674373	-0.000023100		
			2.026180239	0.000646122	-0.000095918		
			1.948127239	0.000797409	-0.000233951		
			1.774448430	0.000160465	-0.000017528		
			1.654914733	0.000303184	-0.000056067		
			1.613069369	0.000149063	-0.000007196		
			1.263892528	0.000101630	-0.000008400		
			1.229317698	0.000067532	-0.000001781		
			1.003758392	0.000123603	-0.000019550		
			0.908352855	0.000131656	-0.000040432		
			0.751701139	0.000022883	-0.000002674		
			0.410236396	0.000011064	-0.000002042		
			0.344114373	0.000010156	-0.000001620		
4P3/2 -- (4)	173.732666	-486.979749	2.866557457	0.002400574		-0.000634719	0.000132378
4D3/2			2.894282637	0.000639338	-0.000015689		
4D5/2			2.725924575	0.001500012	-0.000117029		
4F5/2			2.969831623	0.000555979	-0.000019569		
4F7/2			2.908572599	0.000983414	-0.000058967		
5S1/2			1.966334250	0.001172825	-0.000183917		
5P1/2			1.945679291	0.000380643	-0.000035391		
5P3/2			1.713218919	0.000460573	-0.000087696		
5D3/2			1.634707338	0.000151705	-0.000014512		
5D5/2			1.574529993	0.000346766	-0.000035781		
5F5/2			1.246713987	0.000056900	-0.000003147		
5F7/2			1.209694222	0.000093011	-0.000006468		
6S1/2			0.992984428	0.000204311	-0.000033668		
6P1/2			0.906802726	0.000060272	-0.000006249		
6P3/2			0.743953323	0.000062556	-0.000012573		
6D3/2			0.409447629	0.000005816	-0.000000593		
7S1/2			0.343233868	0.000016607	-0.000002754		
4D3/2 -- (4)	163.616651	-469.664356	2.943844801	0.003398647		-0.000019728	0.000005413
4D5/2			2.918364626	0.000597129	-0.000000216		
4F5/2			2.878132747	0.001704520	-0.000154553		
4F7/2			3.004544704	0.000556121	-0.000003272		
5S1/2			1.988582018	0.000334672	-0.000013962		
5P1/2			1.939868137	0.000848348	-0.0000100783		
5P3/2			1.745270279	0.000178371	-0.000008040		
5D3/2			1.616041825	0.000463953	-0.000060957		
5D5/2			1.588431339	0.000139050	-0.000003144		
5F5/2			1.247249342	0.000186759	-0.000022435		
5F7/2			1.214722546	0.000051248	-0.000000972		
6S1/2			0.996736640	0.000061985	-0.000003357		
6P1/2			0.906640364	0.000123406	-0.000015454		
6P3/2			0.747764068	0.000024007	-0.000001225		
6D3/2			0.408884353	0.000016613	-0.000002316		
7S1/2			0.343537332	0.000005078	-0.000000284		
4D5/2 -- (6)	149.162296	-446.130347	2.846379979	0.002742593		-0.000003040	0.000001289
4F5/2			2.963675344	0.000470890	-0.000007173		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 6D1	Z=103 A=257 R=1.44177E-04 A.U.						
4F7/2			2.841808840	0.001441275	-0.000088768		
5S1/2			1.971317869	0.000387772	-0.000013488		
5P1/2			1.944532281	0.000239813	-0.000005858		
5P3/2			1.726548924	0.000395494	-0.000031645		
5D3/2			1.633788659	0.000121616	-0.000003748		
5D5/2			1.561563336	0.000390713	-0.000037400		
5F5/2			1.245559677	0.000049194	-0.000002434		
5F7/2			1.207133549	0.000156618	-0.000017155		
6S1/2			0.993678466	0.000069042	-0.000003314		
6P1/2			0.906614916	0.000037143	-0.000001261		
6P3/2			0.745443425	0.000050776	-0.000004281		
6D3/2			0.409412805	0.000004405	-0.000000154		
7S1/2			0.343287581	0.000005634	-0.000000281		
4F5/2 -- (6)	135.144642	-422.540326	3.058787932	0.003659760		-0.000000012	0.000000006
4F7/2			3.083960882	0.000589891	-0.000000006		
5S1/2			2.002504133	0.000200966	-0.000000330		
5P1/2			1.959002225	0.000287523	-0.000002096		
5P3/2			1.753331139	0.000126578	-0.000000714		
5D3/2			1.639054248	0.000271924	-0.000011206		
5D5/2			1.593703830	0.000091754	-0.000000922		
5F5/2			1.243577329	0.000238675	-0.000013257		
5F7/2			1.221137281	0.000059242	-0.000000391		
6S1/2			0.999241173	0.000038224	-0.000000342		
6P1/2			0.909398445	0.000044262	-0.000000752		
6P3/2			0.748829046	0.000017025	-0.000000166		
6D3/2			0.409648341	0.000009369	-0.000000407		
7S1/2			0.343740742	0.000003140	-0.000000032		
4F7/2 -- (8)	130.193195	-413.744799	3.018104919	0.003326848		-0.000000003	0.000000002
5S1/2			1.994762034	0.000243166	-0.000000268		
5P1/2			1.962992038	0.000178320	-0.000000292		
5P3/2			1.744156928	0.000206238	-0.000001638		
5D3/2			1.644957227	0.000102334	-0.000000531		
5D5/2			1.582513066	0.000230656	-0.000007025		
5F5/2			1.255084811	0.000051455	-0.000000429		
5F7/2			1.208522193	0.000215442	-0.0000009250		
6S1/2			0.997828307	0.000043878	-0.000000332		
6P1/2			0.909504798	0.000027441	-0.000000169		
6P3/2			0.747712788	0.000026648	-0.000000346		
6D3/2			0.409810422	0.000003627	-0.000000026		
7S1/2			0.343624984	0.000003586	-0.000000031		
5S1/2 -- (2)	91.789820	-286.887493	1.673122398	0.000338427		-0.022864713	0.001276276
5P1/2			1.462567322	0.000198861	-0.000016425		
5P3/2			1.368779554	0.000341548	-0.000090130		
5D3/2			1.385822490	0.000208708	-0.000027060		
5D5/2			1.353044642	0.000113873	-0.000028265		
5F5/2			1.131229783	0.000084022	-0.000010679		
5F7/2			1.103210178	0.000043573	-0.000010117		
6S1/2			0.917203243	0.000053474	-0.000026716		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM	6D1	Z=103 A=257 R=1.44177E-04 A.U.					
6P1/2			0.854475289	0.000037027	-0.000008248		
6P3/2			0.710697743	0.000020990	-0.000007327		
6D3/2			0.401657386	0.000004601	-0.000000727		
7S1/2			0.337265229	0.000004431	-0.000002261		
5P1/2 -- (2)	86.058878	-275.731851	1.631999207	0.000594670		-0.005652934	0.000436682
5P3/2			1.435990107	0.000049801	-0.000003967		
5D3/2			1.295915019	0.000566102	-0.000128129		
5D5/2			1.364764924	0.000044315	-0.000004991		
5F5/2			1.108165187	0.000137819	-0.000027771		
5F7/2			1.102985720	0.000023385	-0.000003023		
6S1/2			0.926978489	0.000076335	-0.000012318		
6P1/2			0.840050708	0.000054536	-0.000018695		
6P3/2			0.713310952	0.000008778	-0.000001189		
6D3/2			0.400021626	0.000010089	-0.000002612		
7S1/2			0.337940078	0.000006077	-0.000001016		
5P3/2 -- (4)	57.073611	-225.064329	1.366349699	0.000248404		-0.000169647	0.000035318
5D3/2			1.306404182	0.000090646	-0.000005483		
5D5/2			1.224565575	0.000181384	-0.000033105		
5F5/2			1.083607611	0.000056054	-0.000004802		
5F7/2			1.045553731	0.000063024	-0.000013352		
6S1/2			0.901924027	0.000140449	-0.000022438		
6P1/2			0.837973583	0.000031111	-0.000003066		
6P3/2			0.697839591	0.000025941	-0.000005499		
6D3/2			0.399376655	0.000001878	-0.000000163		
7S1/2			0.336084761	0.000010511	-0.000001743		
5D3/2 -- (4)	47.477929	-202.599868	1.262086466	0.000278512		-0.000004753	0.000001302
5D5/2			1.244912429	0.000048301	-0.000000026		
5F5/2			1.003036380	0.000182147	-0.000037989		
5F7/2			1.037868719	0.000022402	-0.000000683		
6S1/2			0.890621052	0.000033665	-0.000001213		
6P1/2			0.816450635	0.000084019	-0.000010204		
6P3/2			0.697247931	0.000012302	-0.000000689		
6D3/2			0.395948320	0.000006498	-0.000000842		
7S1/2			0.335269401	0.000002599	-0.000000126		
5D5/2 -- (6)	42.924557	-192.805623	1.217721568	0.000221108		-0.000000721	0.000000305
5F5/2			1.043460702	0.000040998	-0.000002071		
5F7/2			0.983235321	0.000116895	-0.000023375		
6S1/2			0.881437348	0.000041658	-0.000001006		
6P1/2			0.821250947	0.000020416	-0.000000437		
6P3/2			0.690765108	0.000030215	-0.000003037		
6D3/2			0.397340028	0.000001717	-0.000000052		
7S1/2			0.334640569	0.000003012	-0.000000113		
5F5/2 -- (6)	24.258952	-140.465445	0.904333968	0.000119358		-0.000000002	0.000000001
5F7/2			0.903002858	0.000018432	-0.000000000		
6S1/2			0.804601232	0.000014684	-0.000000379		
6P1/2			0.744003494	0.000018873	-0.000000377		
6P3/2			0.653290608	0.000006069	-0.000000013		
6D3/2			0.384179915	0.000004247	-0.000000067		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
LAWRENCIUM 6D1 Z=103 A=257 R=1.44177E-04 A.U.							
5F7/2 -- (8)	22.682972	-135.686952	0.329104767 0.877284574	0.000001122 0.000103118	-0.000000001 -0.000103118	-0.000000000	0.000000000
6S1/2			0.793610451	0.000019069	-0.000000434		
6P1/2			0.749345289	0.000011958	-0.000000055		
6P3/2			0.642590523	0.000011949	-0.000000057		
6D3/2			0.386839268	0.000001544	-0.000000001		
7S1/2			0.328209063	0.000001386	-0.000000000		
6S1/2 -- (2)	21.474802	-118.861068	0.763473937	0.000026531	-0.004592802	0.000256311	
6P1/2			0.640243833	0.000026285	-0.000003408		
6P3/2			0.577899556	0.000030903	-0.000008503		
6D3/2			0.378263850	0.000005933	-0.000000807		
7S1/2			0.320797953	0.000001611	-0.000000770		
6P1/2 -- (2)	17.155720	-105.877623	0.689775829	0.000037364	-0.000953696	0.000073641	
6P3/2			0.584711205	0.000002821	-0.000000223		
6D3/2			0.361223965	0.000017248	-0.000004022		
7S1/2			0.320538345	0.000003199	-0.000000487		
6P3/2 -- (4)	9.662591	-83.222587	0.542802783	0.000012885	-0.000023600	0.000004911	
6D3/2			0.357732484	0.000003335	-0.000000322		
7S1/2			0.310306071	0.000004872	-0.000000661		
6D3/2 -- (1)	2.473175	-43.417987	0.000000000	0.000000000	-0.000000177	0.000000048	
7S1/2			0.254457893	0.000000511	-0.000000017		
7S1/2 -- (2)	2.035847	-36.721539	0.255350978	0.000000817	-0.000380015	0.000021207	
ETOT	-37665.92812	49605.04673	-100562.73030	13250.56748	64.016495899	-6.637939622	1.061124506
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
1S1/2 -- (2)	9647.184115	-16171.731797	86.356610198	18.448465693	-7.087816915	0.440901514	
2S1/2			27.550866450	1.086898819	-0.136665407		
2P1/2			35.365016802	2.225632904	-0.247585704		
2P3/2			25.140578202	0.833564677	-0.240469608		
3S1/2			11.471450472	0.243544509	-0.032588203		
3P1/2			13.118404678	0.447673823	-0.047931789		
3P3/2			10.300129073	0.200814358	-0.059658692		
3D3/2			10.501498005	0.008293732	-0.000851920		
3D5/2			9.840267442	0.003213460	-0.001024913		
4S1/2			5.360991122	0.068083792	-0.009236865		
4P1/2			5.744539056	0.119472798	-0.012677711		
4P3/2			4.711969251	0.055350190	-0.016559232		
4D3/2			4.626844484	0.002656831	-0.000273692		
4D5/2			4.391782969	0.001036302	-0.000333735		
4F5/2			4.167137615	0.000009015	-0.000000842		
4F7/2			4.078783623	0.000003555	-0.000001166		
5S1/2			2.605323069	0.019367978	-0.002637640		
5P1/2			2.637974737	0.032250122	-0.003413930		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
5P3/2			2.202207689	0.014714490	-0.004410466		
5D3/2			2.007821709	0.000640543	-0.000066032		
5D5/2			1.909621444	0.000246255	-0.000079493		
5F5/2			1.424511498	0.000001492	-0.000000140		
5F7/2			1.379554255	0.000000569	-0.000000187		
6S1/2			1.139785100	0.003972156	-0.000541489		
6P1/2			1.047820999	0.005601505	-0.000592614		
6P3/2			0.833906674	0.002133914	-0.000639884		
6D3/2			0.481826341	0.000031131	-0.000003210		
7S1/2			0.372887594	0.000354406	-0.000048321		
2S1/2 -- (2)	2517.798610	-4224.180101	19.777477535	0.472271816		-1.267677901	0.072918276
2P1/2			20.086565975	0.145452031	-0.000111850		
2P3/2			17.240418594	0.177445967	-0.011663189		
3S1/2			9.285112468	0.057424515	-0.013507699		
3P1/2			10.363987393	0.101112477	-0.015157116		
3P3/2			8.877777833	0.046119435	-0.004591208		
3D3/2			9.900072686	0.048223010	-0.006496392		
3D5/2			9.388265019	0.019806687	-0.006355981		
4S1/2			4.770865176	0.015911356	-0.003953923		
4P1/2			5.010339739	0.027946160	-0.004298788		
4P3/2			4.332016136	0.013273141	-0.001519907		
4D3/2			4.462164718	0.011315489	-0.001607494		
4D5/2			4.268379187	0.004923523	-0.001625044		
4F5/2			4.161776265	0.000729367	-0.000093832		
4F7/2			4.074287058	0.000256822	-0.000091466		
5S1/2			2.438767557	0.004513812	-0.001135122		
5P1/2			2.439709322	0.007594177	-0.001174579		
5P3/2			2.101932893	0.003561003	-0.000420909		
5D3/2			1.969483628	0.002537196	-0.000365101		
5D5/2			1.881377532	0.001103624	-0.000365858		
5F5/2			1.423657392	0.000114691	-0.000014881		
5F7/2			1.378862075	0.000039153	-0.000014065		
6S1/2			1.105693191	0.000925044	-0.000233312		
6P1/2			1.013379633	0.001320992	-0.000204575		
6P3/2			0.819387805	0.000517425	-0.000061583		
6D3/2			0.479973962	0.000121805	-0.000017566		
7S1/2			0.369846748	0.000082525	-0.000020824		
2P1/2 -- (2)	2537.610968	-4247.603412	25.269191185	1.100633379		-0.298935147	0.024183586
2P3/2			20.344567783	0.098504344	-0.000833640		
3S1/2			10.011620193	0.039411293	-0.002517479		
3P1/2			10.380420882	0.094428808	-0.013286884		
3P3/2			9.321672317	0.025979138	-0.000689315		
3D3/2			9.943181325	0.137131770	-0.032591206		
3D5/2			9.624648731	0.003575588	-0.000920372		
4S1/2			4.955766182	0.010924112	-0.000783632		
4P1/2			5.033437734	0.024530830	-0.003800253		
4P3/2			4.447738061	0.007199530	-0.000223010		
4D3/2			4.477182256	0.034404656	-0.008413235		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
4D5/2			4.330316777	0.001046399	-0.000255797		
4F5/2			4.163236920	0.000803734	-0.000167772		
4F7/2			4.076898815	0.000042672	-0.000016495		
5S1/2			2.490189538	0.003099190	-0.000228652		
5P1/2			2.447084419	0.006577412	-0.001041451		
5P3/2			2.132298001	0.001915476	-0.000061552		
5D3/2			1.973149941	0.007841633	-0.001930310		
5D5/2			1.895416801	0.000243860	-0.000058780		
5F5/2			1.423891075	0.000127147	-0.000026728		
5F7/2			1.379262408	0.000006580	-0.000002553		
6S1/2			1.116179019	0.000635145	-0.000047195		
6P1/2			1.014706995	0.001140588	-0.000181525		
6P3/2			0.823778833	0.000277826	-0.000009000		
6D3/2			0.480152491	0.000377515	-0.000093034		
7S1/2			0.370781483	0.000056663	-0.000004215		
2P3/2 -- (4)	1336.925794	-2735.846145	18.151650178	0.381927339		-0.007865517	0.001729368
3S1/2			9.470339018	0.047260884	-0.004267504		
3P1/2			10.254131186	0.028036489	-0.001351947		
3P3/2			8.666440379	0.049202274	-0.004670035		
3D3/2			9.892998548	0.042068107	-0.003943305		
3D5/2			9.212302845	0.068007096	-0.019351919		
4S1/2			4.808904782	0.011984803	-0.001140332		
4P1/2			4.980356577	0.007149867	-0.000397025		
4P3/2			4.281667007	0.012693622	-0.001340689		
4D3/2			4.461901776	0.009752978	-0.000918537		
4D5/2			4.230147201	0.015731375	-0.004638810		
4F5/2			4.160428517	0.000701632	-0.000067039		
4F7/2			4.071385676	0.000594865	-0.000193167		
5S1/2			2.448673800	0.003330319	-0.000321694		
5P1/2			2.431539654	0.001911644	-0.000109918		
5P3/2			2.089015334	0.003317493	-0.000359020		
5D3/2			1.969467900	0.002187842	-0.000206425		
5D5/2			1.873054547	0.003471886	-0.001031346		
5F5/2			1.423452132	0.000109099	-0.000010506		
5F7/2			1.378431542	0.000089512	-0.000029343		
6S1/2			1.107677745	0.000678950	-0.000065845		
6P1/2			1.011957214	0.000331299	-0.000019209		
6P3/2			0.817529150	0.000479273	-0.000052143		
6D3/2			0.479973510	0.000105053	-0.000009915		
7S1/2			0.370023158	0.000060521	-0.000005873		
3S1/2 -- (2)	798.179391	-1508.877277	7.412238824	0.031337705		-0.305539506	0.017376106
3P1/2			6.901757877	0.010567016	-0.000085304		
3P3/2			6.277085423	0.014858064	-0.002329017		
3D3/2			7.240866103	0.009125740	-0.0000406437		
3D5/2			7.058551669	0.011053370	-0.000529074		
4S1/2			4.121202760	0.005490042	-0.001898921		
4P1/2			4.310633584	0.008197986	-0.001393633		
4P3/2			3.796687507	0.003324143	-0.000475622		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
4D3/2			3.942122150	0.002529339	-0.000238763		
4D5/2			3.813130266	0.002620708	-0.000192177		
4F5/2			3.995687321	0.002744566	-0.000385951		
4F7/2			3.924601378	0.001225446	-0.000376563		
5S1/2			2.265424874	0.001547811	-0.000555919		
5P1/2			2.256235822	0.002308018	-0.000405529		
5P3/2			1.964745355	0.000932295	-0.000137517		
5D3/2			1.854051085	0.000629150	-0.000065682		
5D5/2			1.781906270	0.000586159	-0.000052403		
5F5/2			1.400400299	0.000339408	-0.000049986		
5F7/2			1.358554589	0.000157074	-0.000047657		
6S1/2			1.070633447	0.000316475	-0.000114457		
6P1/2			0.981707703	0.000403767	-0.000071381		
6P3/2			0.799639026	0.000136665	-0.000020288		
6D3/2			0.474438763	0.000030669	-0.000003248		
7S1/2			0.366725196	0.000028223	-0.000010217		
3P1/2 -- (2)	795.931804	-1505.625934	8.006998769	0.063547531		-0.080769501	0.006366388
3P3/2			6.921237639	0.005126141	-0.000160507		
3D3/2			7.109609669	0.022339724	-0.002430660		
3D5/2			7.447874102	0.007998944	-0.000110653		
4S1/2			4.284562112	0.004534006	-0.000526633		
4P1/2			4.240664349	0.008115060	-0.001807171		
4P3/2			3.876807962	0.001785034	-0.000123101		
4D3/2			3.975698287	0.005200896	-0.000714702		
4D5/2			3.867963499	0.001866623	-0.000058441		
4F5/2			3.989118839	0.004645248	-0.001029361		
4F7/2			3.964272190	0.000485980	-0.000108344		
5S1/2			2.304970183	0.001251258	-0.000157920		
5P1/2			2.243881865	0.002140195	-0.000507067		
5P3/2			1.984007575	0.000487738	-0.000037181		
5D3/2			1.862282442	0.001323474	-0.000201986		
5D5/2			1.793641664	0.000406395	-0.000015465		
5F5/2			1.399875296	0.000586862	-0.000134784		
5F7/2			1.363648895	0.000068181	-0.000014228		
6S1/2			1.078455582	0.000254598	-0.000032719		
6P1/2			0.979777572	0.000369688	-0.000088612		
6P3/2			0.802377568	0.000071083	-0.000005524		
6D3/2			0.474838463	0.000064762	-0.000010028		
7S1/2			0.367419274	0.000022688	-0.000002924		
3P3/2 -- (4)	487.642815	-1102.971703	6.475606751	0.025263402		-0.002341356	0.000501537
3D3/2			6.926161394	0.005613713	-0.000024675		
3D5/2			6.557659661	0.013628030	-0.000265511		
4S1/2			4.135352851	0.007306800	-0.001002376		
4P1/2			4.233807942	0.003146256	-0.000241781		
4P3/2			3.699355954	0.004627712	-0.000680920		
4D3/2			3.870659961	0.002547466	-0.000242724		
4D5/2			3.735864082	0.005158239	-0.000808926		
4F5/2			3.946106982	0.002346494	-0.000235041		

TABLE 1.— CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
4F7/2			3.846516281	0.002268855	-0.000667659		
5S1/2			2.265648977	0.001820475	-0.000261934		
5P1/2			2.236321899	0.000799009	-0.000069667		
5P3/2			1.941362759	0.001187285	-0.000188191		
5D3/2			1.838482086	0.000603710	-0.000060855		
5D5/2			1.765279899	0.001174181	-0.000204746		
5F5/2			1.394135133	0.000271378	-0.000028490		
5F7/2			1.349350894	0.000265892	-0.000078135		
6S1/2			1.070510728	0.000362866	-0.000052783		
6P1/2			0.978274095	0.000137122	-0.000012270		
6P3/2			0.796313559	0.000170851	-0.000027444		
6D3/2			0.473694867	0.000029203	-0.000002967		
7S1/2			0.366711984	0.000032236	-0.000004697		
3D3/2 -- (4)	480.224546	-1093.265893	7.606444094	0.043622527		-0.000064216	0.000018100
3D5/2			7.495216330	0.007680480	-0.000001301		
4S1/2			4.283295883	0.002398185	-0.000064207		
4P1/2			4.331062689	0.005203145	-0.000425532		
4P3/2			3.863966149	0.001553304	-0.000040379		
4D3/2			3.911310076	0.005538259	-0.000558527		
4D5/2			3.871370149	0.001789174	-0.000026807		
4F5/2			3.934001355	0.010603491	-0.002631808		
4F7/2			3.960883650	0.000362952	-0.000042567		
5S1/2			2.303433126	0.000648053	-0.000023253		
5P1/2			2.262449405	0.001247999	-0.000108761		
5P3/2			1.980271044	0.000403237	-0.000012922		
5D3/2			1.850174302	0.001180615	-0.000132467		
5D5/2			1.794248861	0.000391265	-0.000007263		
5F5/2			1.393738378	0.001307917	-0.000332132		
5F7/2			1.363404486	0.000052511	-0.000005626		
6S1/2			1.078084388	0.000131355	-0.000005022		
6P1/2			0.982799906	0.000211579	-0.000018740		
6P3/2			0.801826734	0.000058171	-0.000001942		
6D3/2			0.474273200	0.000056232	-0.000006408		
7S1/2			0.367385394	0.000011699	-0.000000452		
3D5/2 -- (6)	432.237059	-1024.044297	7.254068217	0.034911850		-0.000009763	0.000004254
4S1/2			4.240672736	0.002758636	-0.000363902		
4P1/2			4.325571068	0.001999849	-0.000031678		
4P3/2			3.813198998	0.002976789	-0.000133647		
4D3/2			3.962703429	0.001458592	-0.000030343		
4D5/2			3.778673027	0.004731169	-0.000344989		
4F5/2			4.010818950	0.002234423	-0.000162383		
4F7/2			3.868741761	0.006578561	-0.001830719		
5S1/2			2.292004737	0.000721353	-0.000023156		
5P1/2			2.258950320	0.000506619	-0.000011682		
5P3/2			1.967933762	0.000733049	-0.000037494		
5D3/2			1.858373492	0.000319301	-0.000008240		
5D5/2			1.776125181	0.000988257	-0.000080654		
5F5/2			1.402683032	0.000279467	-0.000020420		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
5F7/2			1.352616927	0.000781028	-0.000221353		
6S1/2			1.075768225	0.000145225	-0.000004999		
6P1/2			0.982130123	0.000086881	-0.000002159		
6P3/2			0.800068888	0.000104638	-0.000005501		
6D3/2			0.474644399	0.000015277	-0.000000407		
7S1/2			0.367179107	0.000012921	-0.000000449		
4S1/2 -- (2)	281.674141	-646.707683	3.429912947	0.003173282		-0.087006429	0.004934021
4P1/2			3.075230350	0.001285698	-0.000044850		
4P3/2			2.857444323	0.002154815	-0.000498476		
4D3/2			3.084749704	0.001349894	-0.000132791		
4D5/2			3.019457887	0.001092357	-0.000154692		
4F5/2			3.208602311	0.000937649	-0.000077733		
4F7/2			3.176926177	0.000967423	-0.000081046		
5S1/2			2.018141829	0.000646816	-0.000282618		
5P1/2			2.025978099	0.000746119	-0.000143696		
5P3/2			1.786017058	0.000299422	-0.000077850		
5D3/2			1.695755682	0.000169589	-0.000021478		
5D5/2			1.635888332	0.000218426	-0.000022323		
5F5/2			1.317123198	0.000070534	-0.000004607		
5F7/2			1.281594165	0.000095293	-0.000004463		
6S1/2			1.023355935	0.000131942	-0.000059376		
6P1/2			0.943116064	0.000136417	-0.000027084		
6P3/2			0.774624311	0.000043688	-0.000011260		
6D3/2			0.466971178	0.000008196	-0.000001068		
7S1/2			0.362546484	0.000011756	-0.000005308		
4P1/2 -- (2)	275.485164	-637.050904	3.485717363	0.006036100		-0.023084639	0.001808028
4P3/2			3.063239771	0.000483234	-0.000028741		
4D3/2			2.920371374	0.003568437	-0.000680892		
4D5/2			3.103773565	0.000620416	-0.000028750		
4F5/2			3.168806009	0.001553324	-0.000200036		
4F7/2			3.225027200	0.000706839	-0.000024403		
5S1/2			2.064448058	0.000682635	-0.000101270		
5P1/2			1.986547104	0.000848597	-0.000248749		
5P3/2			1.805041212	0.000166999	-0.000018632		
5D3/2			1.687649123	0.000321812	-0.000060381		
5D5/2			1.644563347	0.000156920	-0.000007706		
5F5/2			1.317223435	0.000113156	-0.000009412		
5F7/2			1.284573226	0.000075534	-0.000002009		
6S1/2			1.031050319	0.000133501	-0.000021113		
6P1/2			0.937771815	0.000144853	-0.000044453		
6P3/2			0.777026982	0.000024915	-0.000002970		
6D3/2			0.466656857	0.000015329	-0.000002868		
7S1/2			0.363213041	0.000011827	-0.000001887		
4P3/2 -- (4)	178.837108	-498.984150	2.906135541	0.002503197		-0.000679837	0.000144646
4D3/2			2.935793465	0.000665307	-0.000016055		
4D5/2			2.764177133	0.001562531	-0.000121404		
4F5/2			3.014130418	0.000579124	-0.000020114		
4F7/2			2.951681008	0.001026256	-0.000060740		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
5S1/2			2.001429851	0.001253318	-0.000196545		
5P1/2			1.982436950	0.000407794	-0.000037814		
5P3/2			1.741503088	0.000484776	-0.000092496		
5D3/2			1.666085183	0.000161705	-0.000015521		
5D5/2			1.604184725	0.000367818	-0.000038138		
5F5/2			1.298185392	0.000063871	-0.000003577		
5F7/2			1.262843659	0.000104000	-0.000007406		
6S1/2			1.019471696	0.000222441	-0.000036686		
6P1/2			0.935861930	0.000066560	-0.000006895		
6P3/2			0.768620295	0.000068832	-0.000013867		
6D3/2			0.465556004	0.000008126	-0.000000832		
7S1/2			0.362193081	0.000019479	-0.000003234		
4D3/2 -- (4)	168.604082	-481.555668	2.987707191	0.003551334		-0.000021709	0.000006081
4D5/2			2.960790414	0.000622073	-0.000000236		
4F5/2			2.923098009	0.001776732	-0.000159423		
4F7/2			3.050733670	0.000581885	-0.000003390		
5S1/2			2.024864366	0.000354120	-0.000014804		
5P1/2			1.976924107	0.000904213	-0.000107701		
5P3/2			1.774573468	0.000187499	-0.000008468		
5D3/2			1.647245193	0.000491445	-0.000064851		
5D5/2			1.618709068	0.000147008	-0.000003342		
5F5/2			1.298952722	0.000210297	-0.000025660		
5F7/2			1.268432984	0.000057035	-0.000001101		
6S1/2			1.023498629	0.000066964	-0.000003645		
6P1/2			0.935776331	0.000135603	-0.000017043		
6P3/2			0.772728634	0.000026385	-0.000001352		
6D3/2			0.464818389	0.000023023	-0.000003227		
7S1/2			0.362543943	0.000005913	-0.000000333		
4D5/2 -- (6)	153.453761	-456.959715	2.886822190	0.002860643		-0.000003316	0.000001437
4F5/2			3.008530993	0.000490656	-0.000007320		
4F7/2			2.884706345	0.001502250	-0.000090964		
5S1/2			2.006824005	0.000410214	-0.000014270		
5P1/2			1.981461951	0.000254336	-0.000006211		
5P3/2			1.755254263	0.000415699	-0.000033346		
5D3/2			1.665239848	0.000128711	-0.000003992		
5D5/2			1.590970455	0.000413105	-0.000039743		
5F5/2			1.296999280	0.000055216	-0.000002773		
5F7/2			1.260131533	0.000176572	-0.000019762		
6S1/2			1.020236507	0.000074500	-0.000003594		
6P1/2			0.935691924	0.000040641	-0.000001388		
6P3/2			0.770224958	0.000055759	-0.000004716		
6D3/2			0.465513836	0.000006101	-0.000000216		
7S1/2			0.362256785	0.000006552	-0.000000329		
4F5/2 -- (6)	139.365118	-433.383364	3.108683337	0.003835062		-0.000000014	0.000000007
4F7/2			3.133814450	0.000618182	-0.000000007		
5S1/2			2.039762885	0.000212276	-0.000000360		
5P1/2			1.997264156	0.000304457	-0.000002252		
5P3/2			1.783216005	0.000133204	-0.000000768		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
5D3/2			1.671267220	0.000287626	-0.000011909		
5D5/2			1.624451260	0.000097089	-0.000000983		
5F5/2			1.295278946	0.000264661	-0.000014890		
5F7/2			1.275584730	0.000066180	-0.000000443		
6S1/2			1.026226442	0.000041252	-0.000000376		
6P1/2			0.938790596	0.000048404	-0.000000836		
6P3/2			0.773919282	0.000018729	-0.000000186		
6D3/2			0.465859523	0.000012956	-0.000000566		
7S1/2			0.362782669	0.000003653	-0.000000038		
4F7/2 -- (8)	134.172626	-424.194294	3.066378243	0.003483779		-0.000000003	0.000000002
5S1/2			2.031700864	0.000256692	-0.000000291		
5P1/2			2.001187570	0.000188682	-0.000000313		
5P3/2			1.773787368	0.000216748	-0.000001758		
5D3/2			1.677174264	0.000108280	-0.000000570		
5D5/2			1.612926451	0.000243629	-0.000007447		
5F5/2			1.307528508	0.000057119	-0.000000484		
5F7/2			1.261950102	0.000239957	-0.000010441		
6S1/2			1.024722317	0.000047308	-0.000000365		
6P1/2			0.938873375	0.000029991	-0.000000188		
6P3/2			0.772717986	0.000029273	-0.000000387		
6D3/2			0.466069239	0.000005020	-0.000000037		
7S1/2			0.362649798	0.000004168	-0.000000037		
5S1/2 -- (2)	96.064113	-296.389980	1.704964229	0.000359658		-0.024881081	0.001409838
5P1/2			1.491371513	0.000209109	-0.000017005		
5P3/2			1.393916461	0.000368752	-0.000097461		
5D3/2			1.413182574	0.000222253	-0.000028828		
5D5/2			1.379431856	0.000121140	-0.000030141		
5F5/2			1.175022872	0.000093027	-0.000011822		
5F7/2			1.148724745	0.000048694	-0.000011267		
6S1/2			0.940994993	0.000058189	-0.000029094		
6P1/2			0.880992071	0.000041329	-0.000009188		
6P3/2			0.733525897	0.000023650	-0.000008287		
6D3/2			0.455215306	0.000006371	-0.000001011		
7S1/2			0.355539514	0.000005200	-0.000002656		
5P1/2 -- (2)	90.266362	-285.187885	1.664963799	0.000634040		-0.006347959	0.000496318
5P3/2			1.462633430	0.000052894	-0.000000426		
5D3/2			1.322396693	0.000060972	-0.000137508		
5D5/2			1.391870098	0.000046901	-0.000005365		
5F5/2			1.150842508	0.000152603	-0.000030740		
5F7/2			1.148783946	0.000026221	-0.000003370		
6S1/2			0.951314664	0.000082512	-0.000013332		
6P1/2			0.865931825	0.000060245	-0.000020691		
6P3/2			0.736380314	0.000009627	-0.000001337		
6D3/2			0.453075912	0.000014070	-0.000003657		
7S1/2			0.356304009	0.000007077	-0.000001186		
5P3/2 -- (4)	59.228565	-231.419698	1.389618620	0.000262009		-0.000183298	0.000038927
5D3/2			1.330813934	0.000095127	-0.000005685		
5D5/2			1.247171466	0.000191216	-0.000034669		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 6D2 Z=104 A=257 R=1.44177E-04 A.U.							
5F5/2			1.123442115	0.000061292	-0.000005217		
5F7/2			1.086262156	0.000069865	-0.000014600		
6S1/2			0.924605889	0.000153926	-0.000024568		
6P1/2			0.863216606	0.000034746	-0.000003415		
6P3/2			0.719754080	0.000028669	-0.000006107		
6D3/2			0.452123861	0.000002598	-0.000000229		
7S1/2			0.354179376	0.000012364	-0.000002052		
5D3/2 -- (4)	49.525225	-208.901681	1.287499240	0.000296227		-0.000005304	0.000001483
5D5/2			1.274772136	0.000051191	-0.000000029		
5F5/2			1.039471714	0.000198417	-0.000041080		
5F7/2			1.079048398	0.000025190	-0.000000747		
6S1/2			0.913587899	0.000036639	-0.000001335		
6P1/2			0.841096664	0.000092983	-0.000011331		
6P3/2			0.719400916	0.000013570	-0.000000764		
6D3/2			0.447661237	0.000009055	-0.000001193		
7S1/2			0.353320912	0.000003042	-0.000000150		
5D5/2 -- (6)	44.715509	-198.651704	1.241683706	0.000234832		-0.000000798	0.000000346
5F5/2			1.081701097	0.000044721	-0.000002223		
5F7/2			1.021004237	0.000128208	-0.000025260		
6S1/2			0.903954050	0.000045273	-0.000001105		
6P1/2			0.846017013	0.000022511	-0.000000485		
6P3/2			0.712552674	0.000033321	-0.000003368		
6D3/2			0.449465511	0.000002393	-0.000000075		
7S1/2			0.352611919	0.000003515	-0.000000135		
5F5/2 -- (8)	26.346832	-148.149370	0.948156443	0.000136027		-0.000000002	0.000000001
5F7/2			0.948570178	0.000021173	-0.000000000		
6S1/2			0.833593658	0.000016209	-0.000000369		
6P1/2			0.773330113	0.000021109	-0.000000340		
6P3/2			0.678307414	0.000006840	-0.000000007		
6D3/2			0.434525300	0.000006064	-0.000000134		
7S1/2			0.347238526	0.000001341	-0.000000001		
5F7/2 -- (8)	24.740068	-143.473770	0.923105248	0.000118441		-0.000000000	0.000000000
6S1/2			0.823664809	0.000021322	-0.000000427		
6P1/2			0.779698153	0.000013511	-0.000000052		
6P3/2			0.668364445	0.000013444	-0.000000037		
6D3/2			0.437626614	0.000002142	-0.000000002		
7S1/2			0.346419645	0.000001651	-0.000000001		
6S1/2 -- (2)	22.958374	-123.758261	0.784497951	0.000028986		-0.005109906	0.000289481
6P1/2			0.659717173	0.000028377	-0.000003647		
6P3/2			0.596299627	0.000034814	-0.000009549		
6D3/2			0.424863557	0.000008137	-0.000001108		
7S1/2			0.337505162	0.000001918	-0.000000928		
6P1/2 -- (2)	18.577294	-110.862099	0.712673949	0.000041487		-0.001107584	0.000086560
6P3/2			0.604472021	0.000003157	-0.000000265		
6D3/2			0.404024788	0.000023556	-0.000005493		
7S1/2			0.337398516	0.000003779	-0.000000580		
6P3/2 -- (4)	10.470178	-87.073360	0.561341195	0.000014333		-0.000026667	0.000005661
6D3/2			0.399580786	0.000004403	-0.000000422		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
RUTHERFORDIUM 602 Z=104 A=257 R=1.44177E-04 A.U.							
6D3/2 -- (2)	7S1/2	3.299496	-50.114231	0.326375229	0.000005873	-0.000000806	
	(2)			0.320498980	0.000004253		-0.000000258
7S1/2 -- (2)	7S1/2	2.344676	-39.246162	0.279559117	0.000000650	-0.000000013	0.000000072
	(2)			0.269474721	0.000000968	-0.000456019	0.000025833
ETOT	-38650.76285	51308.59350	-103563.21983	13561.58161	66.425185882	-6.872422367	-18.422300696
HAHNIIUM 603 Z=105 A=261 R=1.44921E-04 A.U.							
1S1/2 -- (2)	9991.728991	-16674.760336	87.899462832	19.101722927		-7.536940994	0.476355006
2S1/2			28.070234939	1.130624267	-0.142414837		
2P1/2			36.140506597	2.313823113	-0.254532143		
2P3/2			25.437531370	0.856921765	-0.247172387		
3S1/2			11.679137281	0.253458833	-0.033960130		
3P1/2			13.382636771	0.464817472	-0.049118080		
3P3/2			10.433447546	0.207343883	-0.061583006		
3D3/2			10.636940723	0.008500681	-0.000866057		
3D5/2			9.953348401	0.003290523	-0.001049135		
4S1/2			5.459892569	0.071058265	-0.009652436		
4P1/2			5.860648330	0.124404064	-0.013022730		
4P3/2			4.781144781	0.057426116	-0.017175973		
4D3/2			4.697589045	0.002741451	-0.000280079		
4D5/2			4.454349287	0.001068849	-0.000344098		
4F5/2			4.231939920	0.000009325	-0.000000864		
4F7/2			4.140550084	0.000003686	-0.000001208		
5S1/2			2.659403564	0.020354966	-0.002775491		
5P1/2			2.698149279	0.033853507	-0.003534780		
5P3/2			2.242196347	0.015397478	-0.004614078		
5D3/2			2.049981610	0.000670098	-0.000068508		
5D5/2			1.948292396	0.000257598	-0.000083127		
5F5/2			1.482685464	0.000001634	-0.000000151		
5F7/2			1.438229489	0.000000627	-0.000000206		
6S1/2			1.173338089	0.004269400	-0.000582736		
6P1/2			1.085063600	0.006076004	-0.000634019		
6P3/2			0.862703166	0.002327766	-0.000697853		
6D3/2			0.528853354	0.000039007	-0.000003988		
7S1/2			0.390636756	0.000400301	-0.000054647		
2S1/2 -- (2)	2618.672797	-4368.795077	20.128660355	0.494865465		-1.362394036	0.079563888
2P1/2			20.471727271	0.152557056	-0.000112085		
2P3/2			17.483952162	0.184370510	-0.012629970		
3S1/2			9.439934368	0.060173248	-0.014124231		
3P1/2			10.549294229	0.106186787	-0.015880816		
3P3/2			8.995209661	0.047288460	-0.004661599		
3D3/2			10.032311629	0.049896236	-0.006713184		
3D5/2			9.501939885	0.020430883	-0.006564774		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
4S1/2			4.853485226	0.016720513	-0.004146887		
4P1/2			5.102661164	0.029429036	-0.004515303		
4P3/2			4.395170177	0.013681893	-0.001552594		
4D3/2			4.530759614	0.011800799	-0.001673774		
4D5/2			4.330133229	0.005120132	-0.001692672		
4F5/2			4.226537425	0.000755552	-0.000097048		
4F7/2			4.136035930	0.000265695	-0.000094625		
5S1/2			2.487044397	0.004776327	-0.001198907		
5P1/2			2.491757666	0.008061937	-0.001243673		
5P3/2			2.139466426	0.003703044	-0.000433934		
5D3/2			2.010608519	0.002681706	-0.000385296		
5D5/2			1.919464257	0.001163590	-0.000386417		
5F5/2			1.481774769	0.000125683	-0.000016284		
5F7/2			1.437491311	0.000043023	-0.000015457		
6S1/2			1.137256634	0.001001065	-0.000252030		
6P1/2			1.048013467	0.001449128	-0.000223834		
6P3/2			0.847197930	0.000560953	-0.000066202		
6D3/2			0.526575243	0.000154134	-0.000022196		
7S1/2			0.387254805	0.000093849	-0.000023639		
2P1/2 -- (2)	2642.851679	-4397.131435	25.781575632	1.155333327		-0.331165855	0.027131165
2P3/2			20.636997408	0.101178904	-0.000904445		
3S1/2			10.187952475	0.041334716	-0.002622399		
3P1/2			10.567708487	0.099230974	-0.013901149		
3P3/2			9.449033874	0.026804182	-0.000712581		
3D3/2			10.077756760	0.141458090	-0.033614198		
3D5/2			9.739275362	0.003655290	-0.000946354		
4S1/2			5.044561507	0.011493451	-0.000819120		
4P1/2			5.126857350	0.025865071	-0.003989816		
4P3/2			4.514012755	0.007467159	-0.000231350		
4D3/2			4.546507442	0.035772506	-0.008745199		
4D5/2			4.392846462	0.001077261	-0.000265075		
4F5/2			4.228028860	0.000829016	-0.000172968		
4F7/2			4.138668984	0.000043891	-0.000016983		
5S1/2			2.540559998	0.003283645	-0.000240736		
5P1/2			2.499533179	0.006992069	-0.001102521		
5P3/2			2.170913388	0.002003967	-0.000364402		
5D3/2			2.014498961	0.008264620	-0.002033905		
5D5/2			1.933879117	0.000254560	-0.000061765		
5F5/2			1.482027228	0.000138751	-0.000329157		
5F7/2			1.437920241	0.000007190	-0.000002793		
6S1/2			1.148416987	0.000688240	-0.000050825		
6P1/2			1.049459719	0.001252917	-0.000198595		
6P3/2			0.851938129	0.000303009	-0.000009818		
6D3/2			0.526802083	0.000476401	-0.000117377		
7S1/2			0.388300229	0.000064522	-0.000004770		
2P3/2 -- (4)	1366.630052	-2793.740870	18.354950930	0.393801210		-0.008343694	0.001872473
3S1/2			9.617418183	0.049471872	-0.004497644		
3P1/2			10.419105448	0.029296317	-0.001411904		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
3P3/2			8.771593211	0.050849371	-0.004830516		
3D3/2			10.017235365	0.043512047	-0.004369489		
3D5/2			9.317584937	0.070247312	-0.019990452		
4S1/2			4.889304264	0.012553092	-0.001201574		
4P1/2			5.067237625	0.007480763	-0.000415262		
4P3/2			4.341366643	0.013172905	-0.001392712		
4D3/2			4.528526947	0.010136322	-0.000952210		
4D5/2			4.289642042	0.016344061	-0.004820302		
4F5/2			4.225029570	0.000736061	-0.000070235		
4F7/2			4.132955707	0.000623348	-0.000202447		
5S1/2			2.496363521	0.003510543	-0.000341097		
5P1/2			2.482042620	0.002015696	-0.000115895		
5P3/2			2.125528263	0.003471332	-0.000376110		
5D3/2			2.010139030	0.002303027	-0.000216729		
5D5/2			1.910522734	0.003654913	-0.001085987		
5F5/2			1.481531473	0.000120991	-0.000011637		
5F7/2			1.437005920	0.000099557	-0.000032647		
6S1/2			1.139161229	0.000731804	-0.000071389		
6P1/2			1.046266213	0.000360942	-0.000020930		
6P3/2			0.845106960	0.000522729	-0.000056943		
6D3/2			0.526548570	0.000132381	-0.000012462		
7S1/2			0.387432621	0.000068546	-0.000006691		
3S1/2 -- (2)	829.104104	-1557.241757	7.532612161	0.032865799		-0.328903326	0.018988493
3P1/2			7.018426062	0.011078076	-0.000086516		
3P3/2			6.366102655	0.015594021	-0.002512511		
3D3/2			7.345541600	0.009537147	-0.000433749		
3D5/2			7.155922951	0.011480135	-0.000565505		
4S1/2			4.189506212	0.005770205	-0.001992065		
4P1/2			4.385641893	0.008654683	-0.001468915		
4P3/2			3.850337854	0.003412705	-0.000496845		
4D3/2			4.001753481	0.002618786	-0.000246573		
4D5/2			3.868422766	0.002728707	-0.000198000		
4F5/2			4.058438495	0.002867411	-0.000403212		
4F7/2			3.984877525	0.001277361	-0.000393303		
5S1/2			2.308642121	0.001638017	-0.000587288		
5P1/2			2.302184485	0.002455903	-0.000430834		
5P3/2			1.998665238	0.000964418	-0.000144152		
5D3/2			1.891644926	0.000660808	-0.000068869		
5D5/2			1.817231333	0.000618810	-0.000054773		
5F5/2			1.456906330	0.000374152	-0.000055132		
5F7/2			1.415739622	0.000173549	-0.000052771		
6S1/2			1.100357872	0.000342509	-0.000123665		
6P1/2			1.014198503	0.000443973	-0.000078372		
6P3/2			0.826071098	0.000147385	-0.000022157		
6D3/2			0.519746214	0.000038589	-0.000004082		
7S1/2			0.383802745	0.000032097	-0.000011601		
3P1/2 -- (2)	827.717641	-1554.994863	8.145124753	0.066745531		-0.089591958	0.007147641
3P3/2			7.020286024	0.005268639	-0.000175206		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHN IUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
3D3/2			7.213415401	0.023488202	-0.002613442		
3D5/2			7.552556227	0.008284838	-0.000118858		
4S1/2			4.357262111	0.004758516	-0.000550826		
4P1/2			4.314507731	0.008551436	-0.001898665		
4P3/2			3.932727726	0.001837622	-0.000128881		
4D3/2			4.036178090	0.005343798	-0.000729561		
4D5/2			3.924703803	0.001950638	-0.000060758		
4F5/2			4.052133679	0.004849801	-0.001074887		
4F7/2			4.025263166	0.000504658	-0.000113041		
5S1/2			2.349546245	0.001322654	-0.000166434		
5P1/2			2.289584778	0.002273661	-0.000537190		
5P3/2			2.018636929	0.000506755	-0.000039207		
5D3/2			1.900212327	0.001379493	-0.000209470		
5D5/2			1.829427971	0.000430681	-0.000016289		
5F5/2			1.456395911	0.000646846	-0.000148649		
5F7/2			1.421238668	0.000075127	-0.000015747		
6S1/2			1.108630562	0.000275230	-0.000035275		
6P1/2			1.012170130	0.000405811	-0.000097015		
6P3/2			0.829030073	0.000077006	-0.000006073		
6D3/2			0.520244535	0.000080876	-0.000012468		
7S1/2			0.384573954	0.000025772	-0.000003313		
3P3/2 -- (4)	499.770394	-1127.841662	6.554053702	0.026162452		-0.002493895	0.000544976
3D3/2			7.011580482	0.005811143	-0.000025113		
3D5/2			6.635338070	0.014094338	-0.000275748		
4S1/2			4.200280321	0.007719375	-0.001061597		
4P1/2			4.302823682	0.003319957	-0.000254723		
4P3/2			3.749103361	0.004814158	-0.000708949		
4D3/2			3.926018879	0.002661294	-0.000253623		
4D5/2			3.787180141	0.005367453	-0.000842211		
4F5/2			4.005782503	0.002450045	-0.000245325		
4F7/2			3.903381509	0.002368966	-0.000696995		
5S1/2			2.307926910	0.001930462	-0.000278548		
5P1/2			2.280590567	0.000847622	-0.000073880		
5P3/2			1.974102490	0.001245280	-0.000197602		
5D3/2			1.874923347	0.000638836	-0.000064415		
5D5/2			1.799507137	0.001238263	-0.000216216		
5F5/2			1.449886410	0.000297954	-0.000031298		
5F7/2			1.405567349	0.000293447	-0.000086198		
6S1/2			1.100032539	0.000393190	-0.000057366		
6P1/2			1.010352925	0.000150221	-0.000013445		
6P3/2			0.822429341	0.000186769	-0.000030041		
6D3/2			0.518789803	0.000037001	-0.000003761		
7S1/2			0.383769684	0.000036696	-0.000005363		
3D3/2 -- (4)	492.232189	-1118.012061	7.702519279	0.045197932		-0.000070117	0.000020176
3D5/2			7.585575933	0.007939352	-0.000001404		
4S1/2			4.352025824	0.002509465	-0.000067272		
4P1/2			4.402847973	0.005474229	-0.000450517		
4P3/2			3.916823232	0.001615446	-0.000042019		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
4D3/2			3.967849677	0.005768937	-0.000582752		
4D5/2			3.925413508	0.001861507	-0.000027920		
4F5/2			3.993871613	0.011080250	-0.002750423		
4F7/2			4.020347383	0.000379206	-0.000044473		
5S1/2			2.346888965	0.000682262	-0.000024562		
5P1/2			2.307663403	0.001320668	-0.000115797		
5P3/2			2.014064690	0.000422888	-0.000013576		
5D3/2			1.887098213	0.001245210	-0.000140033		
5D5/2			1.829447339	0.000412493	-0.000007677		
5F5/2			1.449539267	0.001439525	-0.000365739		
5F7/2			1.420774775	0.000058205	-0.000006228		
6S1/2			1.108016927	0.000141390	-0.000005429		
6P1/2			1.015197982	0.000231203	-0.000020607		
6P3/2			0.828329867	0.000063588	-0.000002128		
6D3/2			0.519511181	0.000070979	-0.000008111		
7S1/2			0.384515488	0.000013231	-0.000000513		
3D5/2 -- (6)	442.092601	-1045.763499	7.337691547	0.036089555		-0.000010563	0.000004705
4S1/2			4.307495441	0.002884100	-0.000066866		
4P1/2			4.396217538	0.002092441	-0.000033118		
4P3/2			3.864454336	0.003092513	-0.000139214		
4D3/2			4.019290253	0.001517605	-0.000031661		
4D5/2			3.830374323	0.004917225	-0.000359347		
4F5/2			4.071804154	0.002335458	-0.000169546		
4F7/2			3.925902220	0.006871469	-0.001912292		
5S1/2			2.334874240	0.000758289	-0.000024444		
5P1/2			2.303762732	0.000533699	-0.000012352		
5P3/2			2.001224810	0.000767546	-0.000039383		
5D3/2			1.895332905	0.000336462	-0.000008719		
5D5/2			1.810620049	0.001040190	-0.000085137		
5F5/2			1.459081522	0.000307625	-0.000022455		
5F7/2			1.409082145	0.000862372	-0.000244492		
6S1/2			1.105526211	0.000156061	-0.000005401		
6P1/2			1.014430852	0.000094544	-0.000002362		
6P3/2			0.826423045	0.000114173	-0.000006024		
6D3/2			0.519955850	0.000019268	-0.000000516		
7S1/2			0.384282479	0.000014588	-0.000000511		
4S1/2 -- (2)	293.002667	-667.009314	3.486893771	0.003340579		-0.093957570	0.005408848
4P1/2			3.127870799	0.001347612	-0.000045874		
4P3/2			2.901313859	0.002294494	-0.000536771		
4D3/2			3.132628502	0.001421218	-0.000140785		
4D5/2			3.065255451	0.001140192	-0.000164187		
4F5/2			3.260750997	0.000983669	-0.000081771		
4F7/2			3.227956330	0.001013423	-0.000085333		
5S1/2			2.055466675	0.000685601	-0.0000299357		
5P1/2			2.065722165	0.000798089	-0.000153438		
5P3/2			1.816151043	0.000314838	-0.000083643		
5D3/2			1.728968748	0.000179695	-0.000022924		
5D5/2			1.667311106	0.000230158	-0.000023934		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
5F5/2			1.367932855	0.000078006	-0.000005123		
5F7/2			1.333275667	0.000105659	-0.000004979		
6S1/2			1.050877872	0.000143005	-0.000064312		
6P1/2			0.973257622	0.000150765	-0.000029887		
6P3/2			0.799451755	0.000047701	-0.000012563		
6D3/2			0.510562733	0.000010387	-0.000001364		
7S1/2			0.379208703	0.000013389	-0.000006042		
4P1/2 -- (2)	286.943195	-657.531660	3.546379516	0.006365931		-0.025696954	0.002036826
4P3/2			3.110422615	0.000503127	-0.000031599		
4D3/2			2.967242229	0.003784016	-0.000727598		
4D5/2			3.151632290	0.000643199	-0.000030731		
4F5/2			3.221272501	0.001632406	-0.000211181		
4F7/2			3.277872501	0.000740391	-0.000025783		
5S1/2			2.103198351	0.000720837	-0.000106853		
5P1/2			2.025496630	0.000902727	-0.000264340		
5P3/2			1.835914038	0.000173738	-0.000019805		
5D3/2			1.720728324	0.000341636	-0.000065064		
5D5/2			1.676424782	0.000165060	-0.000008251		
5F5/2			1.368149797	0.000125134	-0.000010478		
5F7/2			1.336572930	0.000083806	-0.000002248		
6S1/2			1.058984302	0.000144165	-0.000022794		
6P1/2			0.967647649	0.000159197	-0.000048814		
6P3/2			0.802053409	0.000027031	-0.000003288		
6D3/2			0.510183747	0.000019417	-0.000003684		
7S1/2			0.379945864	0.000013418	-0.000002141		
4P3/2 -- (4)	184.037343	-511.166331	2.945836388	0.002609012		-0.000727712	0.000157928
4D3/2			2.977427149	0.000691424	-0.000016425		
4D5/2			2.802505622	0.001626876	-0.000125929		
4F5/2			3.058468225	0.000602937	-0.000020669		
4F7/2			2.994808152	0.001070335	-0.000062556		
5S1/2			2.036841450	0.001338800	-0.000209913		
5P1/2			2.019589661	0.000436773	-0.000040376		
5P3/2			1.769978317	0.000509983	-0.000097499		
5D3/2			1.697737161	0.000172240	-0.000016586		
5D5/2			1.634118687	0.000389874	-0.000040613		
5F5/2			1.347188818	0.000071196	-0.000004035		
5F7/2			1.312695576	0.000115329	-0.000008402		
6S1/2			1.046538101	0.000242133	-0.000039961		
6P1/2			0.965334388	0.000073423	-0.000007597		
6P3/2			0.792960362	0.000075459	-0.000015238		
6D3/2			0.508780192	0.000010374	-0.000001067		
7S1/2			0.378794423	0.000022258	-0.000003699		
4D3/2 -- (4)	173.684496	-493.620958	3.031696566	0.003708891		-0.000023866	0.000006823
4D5/2			3.003295385	0.000647678	-0.000000257		
4F5/2			2.968106401	0.001851097	-0.000164421		
4F7/2			3.096944550	0.000608417	-0.000003512		
5S1/2			2.061502784	0.000374518	-0.000015684		
5P1/2			2.014379171	0.000963402	-0.000115030		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
5P3/2			1.804082687	0.000196992	-0.000008913		
5D3/2			1.678721968	0.000520244	-0.000068940		
5D5/2			1.649281279	0.000155333	-0.000003550		
5F5/2			1.348207323	0.000235088	-0.000029109		
5F7/2			1.318853096	0.000062958	-0.000001236		
6S1/2			1.050856356	0.000072327	-0.000003955		
6P1/2			0.965333513	0.000148827	-0.000018770		
6P3/2			0.797373010	0.000028892	-0.000001485		
6D3/2			0.507897149	0.000029157	-0.000004109		
7S1/2			0.379189353	0.000006708	-0.000000380		
4D5/2 -- (6)	157.811390	-467.924341	2.927302140	0.002982101		-0.000003614	0.000001601
4F5/2			3.053382858	0.000510968	-0.0000307468		
4F7/2			2.927583880	0.001564906	-0.000093190		
5S1/2			2.042653486	0.000433770	-0.000015082		
5P1/2			2.018784683	0.000269637	-0.000006580		
5P3/2			1.784147559	0.000436715	-0.000035120		
5D3/2			1.696959394	0.000136133	-0.000004249		
5D5/2			1.620645274	0.000436540	-0.000042204		
5F5/2			1.345974882	0.000061544	-0.000033134		
5F7/2			1.309840536	0.000197371	-0.000022543		
6S1/2			1.047376267	0.000080373	-0.000003896		
6P1/2			0.965182822	0.000044415	-0.000001526		
6P3/2			0.794680594	0.000061005	-0.000005177		
6D3/2			0.508733478	0.000007722	-0.000000276		
7S1/2			0.378867615	0.000007422	-0.000000375		
4F5/2 -- (6)	143.648887	-444.354772	3.158544284	0.004015668		-0.000000016	0.000000008
4F7/2			3.183608691	0.000647308	-0.000000007		
5S1/2			2.077372668	0.000224090	-0.000000390		
5P1/2			2.035936583	0.000322206	-0.000002413		
5P3/2			1.813294835	0.000140092	-0.000000824		
5D3/2			1.703757352	0.000304038	-0.000012645		
5D5/2			1.655488770	0.000102670	-0.000001048		
5F5/2			1.344560109	0.000291500	-0.000016603		
5F7/2			1.326743272	0.000073315	-0.000000498		
6S1/2			1.053815137	0.000044507	-0.000000414		
6P1/2			0.968615408	0.000052863	-0.000000927		
6P3/2			0.798692567	0.000020527	-0.000000208		
6D3/2			0.509192440	0.000016371	-0.000000720		
7S1/2			0.379461206	0.000004141	-0.000000044		
4F7/2 -- (8)	138.206557	-434.758572	3.114570766	0.003645264		-0.000000003	0.000000002
5S1/2			2.068977576	0.000270827	-0.000000315		
5P1/2			2.039791006	0.000199544	-0.000000335		
5P3/2			1.803602742	0.000227663	-0.000001884		
5D3/2			1.709664784	0.000114493	-0.000000612		
5D5/2			1.643618093	0.000257183	-0.000007889		
5F5/2			1.357518708	0.000062976	-0.000000542		
5F7/2			1.312117757	0.000265061	-0.000011683		
6S1/2			1.052213525	0.000050991	-0.000000401		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.							
6P1/2			0.968671235	0.000032736	-0.000000209		
6P3/2			0.797403757	0.000032037	-0.000000431		
6D3/2			0.559440280	0.000006350	-0.000000048		
7S1/2			0.379312593	0.000004718	-0.000000043		
5S1/2 -- (2)	100.512939	-306.162515	1.737193102	0.000382050		-0.027059187	0.001556440
5P1/2			1.520556509	0.000219777	-0.000017586		
5P3/2			1.419341894	0.000398122	-0.000105360		
5D3/2			1.440853620	0.000236625	-0.000030707		
5D5/2			1.406132301	0.000128836	-0.000032135		
5F5/2			1.216701828	0.000102332	-0.000013003		
5F7/2			1.191384580	0.000053967	-0.000012447		
6S1/2			0.965270117	0.000063310	-0.000031682		
6P1/2			0.907858351	0.000046090	-0.000010225		
6P3/2			0.756053958	0.000026579	-0.000009342		
6D3/2			0.496231940	0.000008070	-0.000001287		
7S1/2			0.371566814	0.000005945	-0.000003040		
5P1/2 -- (2)	94.665695	-294.937623	1.698390609	0.000675751		-0.007125597	0.000563790
5P3/2			1.489571777	0.000056250	-0.000004935		
5D3/2			1.349230168	0.000650774	-0.000147573		
5D5/2			1.419308074	0.000049618	-0.000005766		
5F5/2			1.191522429	0.000167910	-0.000033813		
5F7/2			1.191768358	0.000029149	-0.000003728		
6S1/2			0.976162859	0.000089171	-0.000014426		
6P1/2			0.892151839	0.000066476	-0.000022873		
6P3/2			0.759158606	0.000010529	-0.000001498		
6D3/2			0.493672834	0.000017960	-0.000004685		
7S1/2			0.372411036	0.000008029	-0.000001349		
5P3/2 -- (4)	61.444227	-237.897239	1.413076016	0.000276229		-0.000197915	0.000042870
5D3/2			1.355448310	0.000099786	-0.000005892		
5D5/2			1.269997217	0.000201499	-0.000036295		
5F5/2			1.161188222	0.000066589	-0.000005630		
5F7/2			1.124238730	0.000076832	-0.000015834		
6S1/2			0.947696361	0.000168679	-0.000026895		
6P1/2			0.888730832	0.000038766	-0.000003799		
6P3/2			0.741351686	0.000031570	-0.000006760		
6D3/2			0.492401010	0.000003289	-0.000000293		
7S1/2			0.370040230	0.000014171	-0.000002353		
5D3/2 -- (4)	51.639997	-215.340053	1.313182605	0.000314886		-0.000005913	0.000001688
5D5/2			1.299904092	0.000054225	-0.000000033		
5F5/2			1.074194825	0.000214863	-0.000044154		
5F7/2			1.117636230	0.000028086	-0.000000811		
6S1/2			0.936998078	0.000039869	-0.000001468		
6P1/2			0.866025116	0.000102796	-0.000012569		
6P3/2			0.741262406	0.000014916	-0.000000844		
6D3/2			0.487087763	0.000011534	-0.000001544		
7S1/2			0.369161907	0.000003470	-0.000000174		
5D5/2 -- (6)	46.565257	-204.623322	1.265916098	0.000249287		-0.000000882	0.000000390
5F5/2			1.118072409	0.000048490	-0.000002371		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)	
HAHNIIUM 6D3 Z=105 A=261 R=1.44921E-04 A.U.								
			1.056411292	0.000139587	-0.000327090			
			0.926897747	0.000049195	-0.000061213			
			0.871068273	0.000024794	-0.000000538			
			0.734052673	0.000036621	-0.000003722			
			0.489229890	0.000003048	-0.000000097			
			0.368383075	0.000003999	-0.000000156			
5F5/2 -- (6)	28.444076	-155.682163	0.989448802	0.000153413		-0.000000003	0.000000001	
			0.991084566	0.000024021	-0.000000000			
			0.851787067	0.000017834	-0.000000357			
			0.801983205	0.000023525	-0.000000303			
			0.732405696	0.000007666	-0.000000003			
			0.473316555	0.000007895	-0.000000219			
			0.363207974	0.000001556	-0.000000002			
5F7/2 -- (8)	26.785412	-151.014235	0.965494974	0.000134278		-0.000000001	0.000000000	
			0.892475019	0.000023687	-0.000000418			
			0.808982917	0.000015155	-0.000000048			
			0.692931583	0.000015009	-0.000000022			
			0.476654289	0.000002721	-0.000000064			
			0.362430335	0.000001910	-0.000000002			
6S1/2 -- (2)	24.545459	-128.852389	0.805952127	0.000031661		-0.005683713	0.000326855	
			0.679493153	0.000030597	-0.000003896			
			0.614649677	0.000039138	-0.000010699			
			0.460146068	0.000010244	-0.000001396			
			0.352297526	0.000002222	-0.000001087			
6P1/2 -- (2)	20.098437	-116.026470	0.735829540	0.000045996		-0.001284872	0.000101616	
			0.624118332	0.000003529	-0.000000315			
			0.436577002	0.000029629	-0.000006907			
			0.352355238	0.000004347	-0.000000672			
6P3/2 -- (4)	11.306128	-90.957232	0.579515567	0.000015869		-0.000030019	0.000006499	
			0.431209233	0.000005371	-0.000000511			
			0.340638889	0.000006894	-0.000000954			
6D3/2 -- (3)	4.052420	-55.534962	0.353872372	0.000005613		-0.000000345	0.000000098	
			0.298834521	0.000000788	-0.000000009			
7S1/2 -- (2)	2.630660	-41.546851	0.281783874	0.000001114		-0.000533032	0.000030652	
ETOT	-39654.82276	53071.39410	-106647.16212	13877.56709	68.910524893	-7.113092354	-19.668338245	1.249076728
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.								
1S1/2 -- (2)	10351.435556	-17196.436975	89.483308741	19.776215342		-8.017559894	0.514655575	
			28.603266015	1.176099941	-0.148397781			
			36.942002165	2.405424589	-0.261560122			
			25.736115749	0.880561311	-0.253952998			
			11.891476471	0.263756171	-0.035384424			
			13.654082414	0.482535255	-0.050300598			

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
3P3/2			10.567561861	0.213997539	-0.063542499		
3D3/2			10.773030586	0.008706186	-0.000879532		
3D5/2			10.066523946	0.003366978	-0.001073133		
4S1/2			5.560668966	0.074150124	-0.010084178		
4P1/2			5.979389252	0.129501780	-0.013366504		
4P3/2			4.850700607	0.059551003	-0.017806817		
4D3/2			4.768644416	0.002826280	-0.000286288		
4D5/2			4.517010396	0.001101484	-0.000354476		
4F5/2			4.296724596	0.000009632	-0.000000884		
4F7/2			4.202224880	0.000003816	-0.000001250		
5S1/2			2.714395086	0.021384880	-0.002919296		
5P1/2			2.759514079	0.035518801	-0.003656189		
5P3/2			2.282545411	0.016103121	-0.004824315		
5D3/2			2.092547573	0.000700279	-0.000070982		
5D5/2			1.987309016	0.000269203	-0.000086842		
5F5/2			1.538854369	0.000001777	-0.000000163		
5F7/2			1.494384287	0.000000686	-0.000000225		
6S1/2			1.207654444	0.004586383	-0.000626730		
6P1/2			1.122989995	0.006579690	-0.000676834		
6P3/2			0.891277597	0.002530302	-0.000758387		
6D3/2			0.569137345	0.000046666	-0.000004731		
7S1/2			0.406767763	0.000444197	-0.000060710		
2S1/2 -- (2)	2724.459307	-4519.401572	20.488386247	0.518609974	-1.464932302	0.086826610	
2P1/2			20.867678483	0.160041164	-0.000112145		
2P3/2			17.730541840	0.191581368	-0.013676216		
3S1/2			9.597768944	0.063056252	-0.014768241		
3P1/2			10.738789226	0.111523593	-0.016638931		
3P3/2			9.113530733	0.048461897	-0.004730725		
3D3/2			10.165466928	0.051606472	-0.006934080		
3D5/2			9.615976096	0.021064724	-0.006777254		
4S1/2			4.937483706	0.017569946	-0.004348699		
4P1/2			5.196719378	0.030988874	-0.004741924		
4P3/2			4.458713785	0.014093947	-0.001584631		
4D3/2			4.599729920	0.012301510	-0.001741903		
4D5/2			4.392060462	0.005321798	-0.001762188		
4F5/2			4.291287417	0.000781709	-0.000100246		
4F7/2			4.197699001	0.000274531	-0.000097770		
5S1/2			2.536046945	0.005052975	-0.001265886		
5P1/2			2.544674189	0.008556161	-0.001316343		
5P3/2			2.177336590	0.003847891	-0.000446940		
5D3/2			2.052140091	0.002832801	-0.000406343		
5D5/2			1.957907256	0.001226057	-0.000407881		
5F5/2			1.537889475	0.000136860	-0.000017705		
5F7/2			1.493602776	0.000046934	-0.000016865		
6S1/2			1.169478597	0.001082872	-0.000272109		
6P1/2			1.083181145	0.001587396	-0.000244529		
6P3/2			0.874773641	0.000605895	-0.000070890		
6D3/2			0.566461334	0.000186318	-0.000026788		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(L-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
2P1/2 -- 7S1/2	2753.614775	-4553.315023	0.403071577	0.000104864	-0.000026364	-0.367075768	0.030441865
(2)			26.309900072	1.213023512			
2P3/2			20.933109863	0.103875958	-0.000980827		
3S1/2			10.368206460	0.043356421	-0.002731244		
3P1/2			10.759327905	0.104293307	-0.014543182		
3P3/2			9.577547356	0.027641845	-0.000736588		
3D3/2			10.213315612	0.145841783	-0.034650192		
3D5/2			9.854153867	0.003733980	-0.000972450		
4S1/2			5.134998725	0.012092685	-0.000856022		
4P1/2			5.222072369	0.027273355	-0.004188203		
4P3/2			4.580762583	0.007740420	-0.000239937		
4D3/2			4.616232391	0.037172774	-0.009084807		
4D5/2			4.455524980	0.001108086	-0.000274494		
4F5/2			4.292808679	0.000853898	-0.000178070		
4F7/2			4.200390318	0.000045080	-0.000017460		
5S1/2			2.591748425	0.003478542	-0.000253352		
5P1/2			2.552871931	0.007431721	-0.001166751		
5P3/2			2.209901815	0.002095225	-0.000067357		
5D3/2			2.056265081	0.008703998	-0.002141441		
5D5/2			1.972698420	0.000265472	-0.000064849		
5F5/2			1.538160544	0.000150436	-0.000031599		
5F7/2			1.494058629	0.000007798	-0.000003032		
6S1/2			1.181356003	0.000745508	-0.000054699		
6P1/2			1.084755093	0.001374490	-0.000216939		
6P3/2			0.879875311	0.000329292	-0.000010673		
6D3/2			0.566736603	0.000574204	-0.000141440		
7S1/2			0.404220807	0.000072195	-0.000005304		
2P3/2 -- (4)	1396.745302	-2852.361782	18.558880864	0.405923639		-0.008846485	0.002026073
3S1/2			9.766707255	0.051788517	-0.004739607		
3P1/2			10.586773647	0.030613637	-0.001474042		
3P3/2			8.877133219	0.052534444	-0.004994802		
3D3/2			10.141976606	0.044989449	-0.004198088		
3D5/2			9.422972557	0.072534409	-0.020642394		
4S1/2			4.970845554	0.013146521	-0.001265756		
4P1/2			5.155432232	0.007825690	-0.000434131		
4P3/2			4.401292325	0.013664672	-0.001446133		
4D3/2			4.595397399	0.010529689	-0.000986605		
4D5/2			4.349220026	0.016972480	-0.005006463		
4F5/2			4.289611235	0.000771540	-0.000073522		
4F7/2			4.194433806	0.000652648	-0.000211994		
5S1/2			2.544700493	0.003699302	-0.000361510		
5P1/2			2.533275515	0.002124571	-0.000122114		
5P3/2			2.162318619	0.003630524	-0.000393812		
5D3/2			2.051174385	0.002422698	-0.000227390		
5D5/2			1.948312253	0.003845324	-0.001142845		
5F5/2			1.537604465	0.000133383	-0.000012814		
5F7/2			1.493059622	0.000109976	-0.000036075		
6S1/2			1.171281334	0.000788347	-0.000077350		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
			1.081065809	0.000392619	-0.000022763		
			0.872431639	0.000568158	-0.000061971		
			0.566398106	0.000159341	-0.000014961		
			0.403245314	0.000076271	-0.000007488		
3S1/2 -- (2)	861.407773	-1607.361957	7.655144199	0.034469213		-0.354211639	0.020751933
3P1/2			7.137379147	0.011614866	-0.000087677		
3P3/2			6.456132531	0.016373463	-0.002710369		
3D3/2			7.451374950	0.009967300	-0.000463090		
3D5/2			7.254180008	0.011920419	-0.000604601		
4S1/2			4.258848049	0.006064050	-0.002089409		
4P1/2			4.461894168	0.009135984	-0.001548042		
4P3/2			3.904296758	0.003502737	-0.000519587		
4D3/2			4.061745645	0.002709280	-0.000254421		
4D5/2			3.923951753	0.002839733	-0.000203875		
4F5/2			4.121297671	0.002993619	-0.000420937		
4F7/2			4.045189214	0.001330381	-0.000410481		
5S1/2			2.352460022	0.001733003	-0.000620204		
5P1/2			2.348820593	0.002612430	-0.000457571		
5P3/2			2.032859396	0.000997067	-0.000151204		
5D3/2			1.929588995	0.000693387	-0.000072135		
5D5/2			1.852881876	0.000652884	-0.000057197		
5F5/2			1.511453240	0.000410147	-0.000060466		
5F7/2			1.470461819	0.000190475	-0.000058051		
6S1/2			1.130656871	0.000370508	-0.000133539		
6P1/2			1.047124293	0.000487455	-0.000085917		
6P3/2			0.852244540	0.000158378	-0.000024139		
6D3/2			3.558411703	0.000046363	-0.000004898		
7S1/2			0.399320211	0.000035864	-0.000012941		
3P1/2 -- (2)	861.018552	-1606.270086	8.286087175	0.070110275		-0.099422725	0.008024890
3P3/2			7.120406577	0.005414206	-0.000191155		
3D3/2			7.318391888	0.024701941	-0.002810913		
3D5/2			7.658227766	0.008577417	-0.000127684		
4S1/2			4.431139967	0.004993720	-0.000575999		
4P1/2			4.389582503	0.009010945	-0.001994422		
4P3/2			3.989018801	0.001890548	-0.000134948		
4D3/2			4.097017750	0.005485417	-0.000743924		
4D5/2			3.981715002	0.002037492	-0.000063153		
4F5/2			4.115274475	0.005059478	-0.001121553		
4F7/2			4.086272016	0.000523525	-0.000117846		
5S1/2			2.394769247	0.001397780	-0.000175342		
5P1/2			2.335974708	0.002414864	-0.000568876		
5P3/2			2.053565345	0.000526122	-0.000041339		
5D3/2			1.938499904	0.001436113	-0.000216926		
5D5/2			1.865555463	0.000456175	-0.000017147		
5F5/2			1.510965187	0.000708931	-0.000163008		
5F7/2			1.476358802	0.000082206	-0.000017312		
6S1/2			1.139404279	0.000297401	-0.000038007		
6P1/2			1.044996068	0.000444836	-0.000106050		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
6P3/2			0.855432026	0.000083114	-0.000006656		
6D3/2			0.559005120	0.000096417	-0.000014795		
7S1/2			0.400162366	0.000028765	-0.000003687		
3P3/2 -- (4)	512.094216	-1153.057002	6.632766572	0.027084479		-0.002654978	0.000591769
3D3/2			7.097300421	0.006013545	-0.000025556		
3D5/2			6.713173912	0.014571459	-0.000286390		
4S1/2			4.265960889	0.008155081	-0.001124065		
4P1/2			4.372703542	0.003503341	-0.000268263		
4P3/2			3.799007931	0.005006005	-0.000737804		
4D3/2			3.981540813	0.002778714	-0.000264859		
4D5/2			3.838568464	0.005582032	-0.000876318		
4F5/2			4.065436183	0.002556442	-0.000255885		
4F7/2			3.960175421	0.002471776	-0.000727128		
5S1/2			2.350721244	0.002046504	-0.000296078		
5P1/2			2.325431102	0.000898912	-0.000078298		
5P3/2			2.007060739	0.001305455	-0.000207375		
5D3/2			1.911645400	0.000675522	-0.000068131		
5D5/2			1.833998495	0.001304976	-0.000228161		
5F5/2			1.503635410	0.000325284	-0.000034187		
5F7/2			1.459290364	0.000321732	-0.000094469		
6S1/2			1.130102112	0.000425828	-0.000062303		
6P1/2			1.042827099	0.000164323	-0.000014706		
6P3/2			0.848268779	0.000203465	-0.000032769		
6D3/2			0.557237425	0.000044776	-0.000004554		
7S1/2			0.399263649	0.000041040	-0.000006016		
3D3/2 -- (4)	504.430646	-1143.097546	7.798950885	0.046813759		-0.000076502	0.000022468
3D5/2			7.676120687	0.008203788	-0.000001514		
4S1/2			4.421623562	0.002625410	-0.000070460		
4P1/2			4.475572519	0.005759028	-0.000476894		
4P3/2			3.969862108	0.001679370	-0.000043706		
4D3/2			4.024563162	0.006006399	-0.000607714		
4D5/2			3.979543286	0.001935795	-0.000029063		
4F5/2			4.053731189	0.011570368	-0.002872374		
4F7/2			4.079735970	0.000395881	-0.000346431		
5S1/2			2.390892024	0.000717997	-0.000025933		
5P1/2			2.353476096	0.001397081	-0.000123238		
5P3/2			2.048094456	0.000443276	-0.000014254		
5D3/2			1.924314333	0.001312509	-0.000147927		
5D5/2			1.864930283	0.000434609	-0.000308108		
5F5/2			1.503347723	0.001575350	-0.000400447		
5F7/2			1.475640594	0.000064083	-0.000006848		
6S1/2			1.138514538	0.000152101	-0.000005865		
6P1/2			1.048006474	0.000252258	-0.000022624		
6P3/2			0.854563498	0.000069270	-0.000002324		
6D3/2			0.558096880	0.000085580	-0.000009806		
7S1/2			0.400075277	0.000014701	-0.000000573		
3D5/2 -- (6)	452.063442	-1067.718399	7.421364318	0.037292941		-0.000011419	0.000005200
4S1/2			4.375106685	0.003014757	-0.000069934		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106	604	Z=106 A=263 R=1.45291E-04 A.U.					
4P1/2			4.467748439	0.002188960	-0.000034604		
4P3/2			3.915850657	0.003211388	-0.000144955		
4D3/2			4.076015038	0.001578236	-0.000033018		
4D5/2			3.882121230	0.005108070	-0.000374103		
4F5/2			4.132751190	0.002439344	-0.000176900		
4F7/2			3.982969859	0.007172359	-0.001996091		
5S1/2			2.378265075	0.000796799	-0.000025790		
5P1/2			2.349150389	0.000561981	-0.000013052		
5P3/2			2.034734926	0.000803265	-0.000041346		
5D3/2			1.932573869	0.000354312	-0.000092220		
5D5/2			1.845377372	0.001094193	-0.000089809		
5F5/2			1.513470783	0.000336680	-0.000024552		
5F7/2			1.463046486	0.000945910	-0.000268266		
6S1/2			1.135839491	0.000167601	-0.000005831		
6P1/2			1.047132787	0.000102715	-0.000002579		
6P3/2			0.852501722	0.000124146	-0.000006574		
6D3/2			0.558605257	0.000023214	-0.000000625		
7S1/2			0.399816704	0.000016181	-0.000000570		
4S1/2 -- (2)	304.812263	-687.967572	3.544699958	0.003516254		-0.101500134	0.005929244
4P1/2			3.181318949	0.001412446	-0.000046894		
4P3/2			2.945630319	0.002444220	-0.000577977		
4D3/2			3.181310199	0.001496301	-0.000149296		
4D5/2			3.111384475	0.001189689	-0.000174278		
4F5/2			3.313235059	0.001031697	-0.000086039		
4F7/2			3.279280672	0.001061059	-0.000089866		
5S1/2			2.093283983	0.000726451	-0.000316946		
5P1/2			2.176022015	0.000853299	-0.000163759		
5P3/2			1.846519245	0.000331342	-0.000089931		
5D3/2			1.762464849	0.000190313	-0.000024462		
5D5/2			1.699000110	0.000242337	-0.000025663		
5F5/2			1.416902563	0.000085774	-0.000005665		
5F7/2			1.382653980	0.000116404	-0.000005521		
6S1/2			1.078888701	0.000154908	-0.000069614		
6P1/2			1.003748149	0.000166351	-0.000032923		
6P3/2			0.824007404	0.000051958	-0.000013982		
6D3/2			0.547620400	0.000012573	-0.000001664		
7S1/2			0.394357080	0.000014980	-0.0000006756		
4P1/2 -- (2)	298.918404	-678.710643	3.607993676	0.006713166		-0.028614430	0.002294346
4P3/2			3.158034774	0.000524169	-0.000034719		
4D3/2			3.014567068	0.004013307	-0.000777677		
4D5/2			3.199838044	0.000666344	-0.000032849		
4F5/2			3.274090159	0.001715164	-0.000223015		
4F7/2			3.331044284	0.000775051	-0.000027248		
5S1/2			2.142479752	0.000760904	-0.000112691		
5P1/2			2.064992374	0.000959980	-0.000280767		
5P3/2			1.867043774	0.000180687	-0.000021052		
5D3/2			1.754086041	0.000362748	-0.000070152		
5D5/2			1.708569925	0.000173459	-0.000008832		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
5F5/2			1.417247616	0.000137584	-0.000011601		
5F7/2			1.386279249	0.000092394	-0.000002499		
6S1/2			1.087426692	0.000155597	-0.000024594		
6P1/2			0.997867428	0.000174698	-0.000053512		
6P3/2			0.826815397	0.000029228	-0.000033629		
6D3/2			0.547183521	0.000023503	-0.000004525		
7S1/2			0.395158269	0.000014956	-0.000002386		
4P3/2 -- (4)	189.333699	-523.526751	2.985656100	0.002718069		-0.000778486	0.000172295
4D3/2			3.019180021	0.000718600	-0.000016798		
4D5/2			2.840906923	0.001693070	-0.000130610		
4F5/2			3.102841771	0.000627427	-0.000021235		
4F7/2			3.037950213	0.001115664	-0.000064417		
5S1/2			2.072600376	0.001429720	-0.000224081		
5P1/2			2.057142889	0.000467710	-0.000043085		
5P3/2			1.798618192	0.000536202	-0.000102709		
5D3/2			1.729594749	0.000183310	-0.000017706		
5D5/2			1.664248000	0.000412912	-0.000043204		
5F5/2			1.394294905	0.000078887	-0.000004523		
5F7/2			1.360198613	0.000127049	-0.000009460		
6S1/2			1.074050355	0.000263412	-0.000043495		
6P1/2			0.995104362	0.000080869	-0.000008356		
6P3/2			0.817008722	0.000082434	-0.000016684		
6D3/2			0.545474655	0.000012647	-0.000001306		
7S1/2			0.393880740	0.000024985	-0.000004156		
4D3/2 -- (4)	178.858254	-505.860711	3.075809310	0.003871396		-0.000026213	0.000007648
4D5/2			3.045876397	0.000673948	-0.000000280		
4F5/2			3.013153871	0.001927646	-0.000169552		
4F7/2			3.143173055	0.000635724	-0.000003637		
5S1/2			2.098533192	0.000395929	-0.000016604		
5P1/2			2.052238347	0.001026112	-0.000122791		
5P3/2			1.833770642	0.000206854	-0.000009375		
5D3/2			1.710405321	0.000550341	-0.000073224		
5D5/2			1.680062470	0.000164014	-0.000003768		
5F5/2			1.395582331	0.000261171	-0.000032786		
5F7/2			1.366933331	0.000069047	-0.000001377		
6S1/2			1.078675604	0.000078069	-0.000004289		
6P1/2			0.995196451	0.000163076	-0.000020636		
6P3/2			0.821731553	0.000031527	-0.000001627		
6D3/2			0.544464490	0.000035268	-0.000004997		
7S1/2			0.394317200	0.000007475	-0.000000426		
4D5/2 -- (6)	162.234998	-479.023998	2.967817369	0.003107004		-0.000003934	0.000001782
4F5/2			3.098227941	0.000531830	-0.000007616		
4F7/2			2.970437883	0.001629259	-0.000095448		
5S1/2			2.078840180	0.000458517	-0.000015924		
5P1/2			2.056506560	0.000285758	-0.000006963		
5P3/2			1.813201965	0.000458550	-0.000036969		
5D3/2			1.728878615	0.000143881	-0.000004519		
5D5/2			1.650505269	0.000460995	-0.000044781		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
5F5/2			1.393055857	0.000068190	-0.000003519		
5F7/2			1.357206407	0.000219101	-0.000025508		
6S1/2			1.074964314	0.000086651	-0.000004219		
6P1/2			0.994971885	0.000048459	-0.000001674		
6P3/2			0.818845037	0.000066510	-0.000005662		
6D3/2			0.545425103	0.000009336	-0.000000336		
7S1/2			0.393962961	0.000008259	-0.000000420		
4F5/2 -- (6)	147.995449	-455.453916	3.208365542	0.004201623		-0.000000018	0.000000009
4F7/2			3.233337839	0.000677274	-0.000000008		
5S1/2			2.115370697	0.000236434	-0.000000421		
5P1/2			2.075026236	0.000340806	-0.000002578		
5P3/2			1.843539948	0.000147243	-0.000000883		
5D3/2			1.736455254	0.000321150	-0.000013415		
5D5/2			1.686729832	0.000108494	-0.000001115		
5F5/2			1.391985246	0.000319237	-0.000018398		
5F7/2			1.375564010	0.000080679	-0.000000556		
6S1/2			1.081871932	0.000047982	-0.000000454		
6P1/2			0.998756010	0.000057631	-0.000001026		
6P3/2			0.823182560	0.000022417	-0.000000231		
6D3/2			0.546002438	0.000019759	-0.000000874		
7S1/2			0.394620290	0.000004610	-0.000000050		
4F7/2 -- (8)	142.294263	-445.436666	3.162676501	0.003811331		-0.000000004	0.000000002
5S1/2			2.106628362	0.000285610	-0.000000339		
5P1/2			2.078809013	0.000210926	-0.000000357		
5P3/2			1.833575408	0.000238985	-0.000002015		
5D3/2			1.742358503	0.000120972	-0.000000655		
5D5/2			1.674502568	0.000271303	-0.000008350		
5F5/2			1.405623602	0.000069037	-0.000000603		
5F7/2			1.359967638	0.000290870	-0.000012980		
6S1/2			1.080166904	0.000054921	-0.000000440		
6P1/2			0.998781239	0.000035669	-0.000000232		
6P3/2			0.821803857	0.000034936	-0.000000478		
6D3/2			0.546281981	0.000007671	-0.000000059		
7S1/2			0.394456933	0.000005246	-0.000000049		
5S1/2 -- (2)	105.155675	-316.229855	1.769849394	0.000405695		-0.029433287	0.001717950
5P1/2			1.550144351	0.000230926	-0.000018175		
5P3/2			1.445062242	0.000429897	-0.000113884		
5D3/2			1.468806412	0.000251876	-0.000032705		
5D5/2			1.433104365	0.000136980	-0.000034253		
5F5/2			1.256817674	0.000111969	-0.000014225		
5F7/2			1.232076628	0.000059418	-0.000013664		
6S1/2			0.989932592	0.000068842	-0.000034479		
6P1/2			0.934986972	0.000051321	-0.000011361		
6P3/2			0.778325168	0.000029806	-0.000010502		
6D3/2			0.530925328	0.000009776	-0.000001566		
7S1/2			0.386166128	0.000006676	-0.000003419		
5P1/2 -- (2)	99.269331	-304.995867	1.732288596	0.000719941		-0.007999439	0.000640232
5P3/2			1.516792410	0.000059899	-0.000005496		

TABLE 1.- CONTINUED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 604 Z=106 A=263 R=1.45291E-04 A.U.							
5D3/2			1.376383735	0.000697693	-0.000158367		
5D5/2			1.447024836	0.000052467	-0.000006196		
5F5/2			1.230738944	0.000183803	-0.000037003		
5F7/2			1.232817356	0.000032180	-0.000004099		
6S1/2			1.001421391	0.000096313	-0.000015602		
6P1/2			0.918628609	0.000073235	-0.000025245		
6P3/2			0.781687812	0.000011486	-0.000001674		
6D3/2			0.527998410	0.000021936	-0.000005742		
7S1/2			0.387082257	0.000008950	-0.000001507		
5P3/2 -- (4)	63.719415	-244.493799	1.436693528	0.000291067		-0.000213552	0.000047171
5D3/2			1.380257161	0.000104620	-0.000006102		
5D5/2			1.292986750	0.000212227	-0.000037984		
5F5/2			1.197369186	0.000071965	-0.000006043		
5F7/2			1.160314679	0.000083966	-0.000017066		
6S1/2			0.971092546	0.000184752	-0.000029423		
6P1/2			0.914429467	0.000043189	-0.000004218		
6P3/2			0.762674133	0.000034644	-0.000007458		
6D3/2			0.526387650	0.000003981	-0.000000359		
7S1/2			0.384462197	0.000015960	-0.000002650		
5D3/2 -- (4)	53.818629	-221.905865	1.339067789	0.000334481		-0.000006584	0.000001918
5D5/2			1.325231184	0.000057396	-0.000000036		
5F5/2			1.107657656	0.000231560	-0.000047228		
5F7/2			1.154434370	0.000031101	-0.000000876		
6S1/2			0.960747473	0.000043353	-0.000001612		
6P1/2			0.891147744	0.000113470	-0.000013916		
6P3/2			0.762870475	0.000016338	-0.000000929		
6D3/2			0.520339075	0.000014034	-0.000001907		
7S1/2			0.383601378	0.000003889	-0.000000198		
5D5/2 -- (6)	48.469171	-210.708913	1.290335418	0.000264454		-0.000000974	0.000000441
5F5/2			1.153052625	0.000052318	-0.000002516		
5F7/2			1.090196316	0.000151123	-0.000028887		
6S1/2			0.950162918	0.000053425	-0.000001330		
6P1/2			0.896316996	0.000027267	-0.000000594		
6P3/2			0.755301419	0.000040114	-0.000004100		
6D3/2			0.522772688	0.000003709	-0.000000121		
7S1/2			0.382760578	0.000004470	-0.000000178		
5F5/2 -- (6)	30.556589	-163.118768	1.028878739	0.000171569		-0.000000003	0.000000062
5F7/2			1.031448900	0.000026990	-0.000000000		
6S1/2			0.899458227	0.000019569	-0.000000344		
6P1/2			0.830183089	0.000026129	-0.000000268		
6P3/2			0.725835928	0.000008549	-0.000000001		
6D3/2			0.556293226	0.000009796	-0.000000321		
7S1/2			0.377803452	0.000001769	-0.000000003		
5F7/2 -- (8)	28.833087	-158.404883	1.005543142	0.000150732		-0.000000001	0.000000000
6S1/2			0.880524696	0.000026180	-0.000000409		
6P1/2			0.837615114	0.000016899	-0.000000044		
6P3/2			0.716676412	0.000016653	-0.000000011		
6D3/2			0.509764247	0.000003305	-0.000000006		

TABLE 1.- CONCLUDED

LEVEL (ELECTRONS)	E(KIN)	E(E-N)	E(E-E)	E(MAG)	E(RET)	E(V-P)	E(H-VP)
ELEMENT 106 6D4 Z=106 A=263 R=1.45291E-04 A.U.							
6S1/2 -- (2)	26.232892	-134.129572	0.377050731	0.000002166	-0.000000003	-0.006321830	0.000368907
6P1/2 -- (2)	21.716175	-121.358223	0.827746011	0.000034559	-0.000004155	-0.001488972	0.000119114
6D3/2 -- (4)	12.168990	-94.875717	0.699504823	0.000032945	-0.000000372	-0.000033668	0.000007433
7S1/2 -- (2)	4.774102	-60.334951	0.632964089	0.000043910	-0.000011960	-0.000000440	0.000000128
6P3/2 -- (4)	2.901728	-43.710020	0.489853589	0.000012356	-0.000001683	-0.0000612430	0.000035737
6D3/2 -- (4)			0.365909511	0.000002528	-0.000001248		
7S1/2 -- (2)			0.759181966	0.000050898			
ETOT	-40679.23107	54902.59456	-109824.70758	14198.41757	71.478302532	-7.360092622	-21.008991460